Roland®

E-60
MUSIC WORKSTATION

E-50
MUSIC WORKSTATION

Owner's Manual

The technology used in the E-60/E-50 is covered by patents pending in certain countries throughout the world.

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Owner's Manual

Thank you for purchasing the Roland E-60/E-50 Music Workstation. The E-60/E-50 contains all major advantages a Roland instrument can offer: perfect accompaniments, high-class sounds, a D Beam controller (E-60), professional effects, the Cover functions of the acclaimed G-70, a Guitar mode… There's simply too much to mention in this introduction.

Much care has been taken to facilitate access to all those countless functions, which is why the E-60/E-50 comes with a touch screen with 16 gray scale levels and a user interface that walks you through anything you may want to do with your E-60/E-50.

To get the most out of the E-60/E-50 and to ensure many years of trouble-free service, we urge you to read through this Owner's Manual thoroughly.

To avoid confusion, let's agree to use the word "button" for all keys on the front panel, and use "key" only when referring to the E-60/E-50's keyboard.

To save space (and time), let us agree to use the word "song" when referring to Standard MIDI Files.

Before using this instrument, carefully read the "Important notes" on p. 11. They provide information concerning the proper operation of the E-60/E-50. Be sure to keep this manual in a safe place for future reference.

Features

Roland's most comprehensive arranger instrument ever

The E-60/E-50 is quite simply a superlative instrument with the most advanced and best sound generation technology Roland has to offer. It contains a superb internal sound source (based on the acclaimed Fantom-X series).

New interface concept

The E-60/E-50 was designed from the ground up to put its massive array of functions at your fingertips. The touch-sensitive screen and the large number of front-panel buttons usually provide direct access to the available functions, thus doing away with the need to wade through countless menus.

Parameters that belong together from a musician's point of view are usually located on the same or adjacent display pages, while setting them has been greatly simplified with respect to earlier arranger instruments.

Cover functions and Makeup Tools for Standard MIDI Files and Music Styles

Reorchestrating existing Standard MIDI Files and Music Styles has become a breeze thanks to high-quality Song and Style Cover presets and an intuitive, instrument-based, set of MAKEUP TOOLS parameters that allow you to "revoice" your songs and Styles without spending hours editing single events.

The structure of Standard MIDI Files can be changed in real-time thanks to four programmable MARK & JUMP memories, which allows you to play extended versions of prerecorded songs.

Adaptive Chord Voicing technology

The E-60/E-50's Arranger not only boasts a new structure (with 4 accompaniment levels, 4 Intros and 4 Ending phrases) but also relies on a more musical real-time conversion of the chords you play into meaningful accompaniment phrases. Roland's patent-applied-for ACV technology can indeed transpose Music Style parts in such a way as to eliminate unnatural jumps of strings lines, piano chords, etc.

Guitar mode

The E-60/E-50 features a Guitar mode that allows you to play super-realistic electric and acoustic guitar parts. Those parts can be used both alongside the Arranger (live applications) and recorded using the E-60/E-50's 16-track Sequencer/Recorder and the Style Composer.

Superfast Recorder and comprehensive 16-track sequencer

The E-60/E-50 provides two approaches for recording new song material: a Recorder function with a straightforward REC-START-STOP approach and a fully-featured 16-track sequencer with track-based and detailed microscope editing functions.

Like many other functions on the E-60/E-50, the Recorder interacts with other sections: you can link a song to each User Program, you can cause any Standard MIDI File to be transposed automatically to a range that allows you to sing with ease, the chords of the songs you play back are recognized automatically and displayed, etc.

Finder functions for songs, Music Styles and User Programs

Another highlight of the E-60/E-50 is the fact that you can work with an almost unlimited number of songs, Music Styles and User Programs (in the internal memory, on memory card or floppy disk). Though there are still factory Music Styles, you can also work with "CUSTOM" links to accompaniments in the internal memory or on memory card, and even select such "external" Styles on the fly. The same high-speed access system is available for Standard MIDI Files (songs) and User Programs.

Thanks to the clever Finder databases, the difference between what's internal and what resides in an "external" memory has become almost imperceptible.

Play List function

With the E-60/E-50's Play List function, you can program set lists for your performances. The advantage of such song chains is that you won't have to look for the desired songs on stage.

Furthermore, you can already prepare the next song while the current one is still running (NEXT SONG function).

D Beam controller (E-60)

The E-60 has the acclaimed D Beam Controller* for intuitive song and Style playback control and additional DJ-like effects via movements over an invisible beam of infrared light.

And, of course, the BENDER/MODULATION lever is also there, as are sockets for optional footswitches and an expression pedal.

(* D Beam technology licensed from Interactive Light, Inc.)

...and so much more
Listing all of the E-60/E-50's advantages and functions
would take another ten pages, while you must be dying
to put it through its paces. That is why we would like to
ask you to read this manual from cover to cover. You'll
find that the E-60/E-50 is quite unlike any other instru-
ment you know.

Have fun!

USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠ WARNING and ⚠ CAUTION Notices

⚠**WARNING**	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
⚠ **CAUTION**	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols

⚠	The △ symbol alerts the user to important instructions or warnings.The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
⊘	The ◯ symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
⬤	The ● symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

- **ALWAYS OBSERVE THE FOLLOWING** -

⚠WARNING

- Before using this instrument, be sure to read the instructions below, and the Owner's Manual.

....

- Do not open or perform any internal modifications on the unit.

....

- Do not attempt to repair the E-60/E-50, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

....

- Never use or store the E-60/E-50 in places that are:
  - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
  - Damp (e.g., baths, washrooms, on wet floors); or are
  - Humid; or are
  - Exposed to rain; or are
  - Dusty; or are
  - Subject to high levels of vibration.

....

- This unit should be used only with a rack or stand that is recommended by Roland.

....

- Make sure you always have the unit placed in such a way that it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces.

....

- The E-60/E-50's adapter should only be connected to a power supply of the type described in the operating instructions or as marked on the adapter's label.

....

⚠WARNING

- Do not excessively twist or bend the adapter cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards!

....

- This instrument, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist.

....

- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit.

....

- In households with small children, an adult should provide supervision until the child is capable of following all rules essential for the safe operation of the E-60/E-50.

....

- Protect the unit from strong impact. (Do not drop it!)

....

- Immediately turn the power off, remove the adapter from the outlet and request servicing by your retailer, the nearest Roland Service Center or an authorized Roland distributor, as listed on the "Information" page when:
  - The adapter's cord or the plug has been damaged; or
  - Objects have fallen into or liquid has been spilled onto the E-60/E-50; or
  - The unit has been exposed to rain (or otherwise has become wet); or
  - The unit does not appear to operate normally or exhibits a marked change in performance.

....

- Do not force the adapter to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.

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⚠ WARNING

- Before using the E-60/E-50 in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

....

⚠ CAUTION

- The E-60/E-50 should be located so that its location or position does not interfere with its proper ventilation.

....

- This unit for use only with Roland keyboard stand KS-12. Use with other stands may result in instability and cause possible injury.

....

- Always grasp only the plug on the power-supply cord when plugging into, or unplugging from, an outlet or this unit.

....

- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed out of the reach of children.

....

- Never climb on top of, nor place heavy objects on the unit.

....

- Never handle the adapter or its plugs with wet hands when plugging into or unplugging from, an outlet or this unit.

....

- If you need to move the instrument, take note of the precautions listed below. Make sure to have a firm grip, to protect yourself from injury and the instrument from damage.
  - Disconnect the power cord.
  - Disconnect all cords coming from external devices.
  - Remove the music stand.

....

- Before cleaning the unit, turn off the power and unplug the power cord from the outlet.

....

- Whenever you suspect the possibility of lightning in your area, disconnect the power cord from the outlet.

....

- Should you remove screws, make sure to put them in a safe place out of children's reach, so there is no chance of them being swallowed accidentally.

....

Contents

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Important notes

In addition to the items listed under "Using the unit safely" on p. 6, please read and observe the following:

Power supply

- Do not use this instrument on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
- Before connecting the E-60/E-50 to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.
- Although the LCD and LEDs are switched off when the POWER switch is switched off, this does not mean that the unit has been completely disconnected from the source of power. If you need to turn off the power completely, first turn off the POWER switch, then unplug the adapter from the power outlet. For this reason, the outlet into which you choose to connect the adapter's plug should be one that is within easy reach and readily accessible.

Placement

- Using the E-60/E-50 near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this instrument or move it further away from the source of interference.
- This instrument may interfere with radio and television reception. Do not use it in the vicinity of such receivers.
- Observe the following when using the unit's floppy disk drive. For further details, refer to "Before using floppy disks (handling the floppy disk drive)".
  - Do not place the unit near devices that produce a strong magnetic field (e.g., loudspeakers).
  - Install the E-60/E-50 on a solid, level surface.
  - Do not move the unit or subject it to vibration while the drive is operating.
- Do not expose the E-60/E-50 to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the E-60/E-50.
- To avoid possible breakdown, do not use the E-60/E-50 in a wet area, such as an area exposed to rain or other moisture.
- Do not allow objects to remain on the keyboard. This can be the cause of malfunction, such as keys ceasing to produce sound.

Maintenance

- For everyday cleaning wipe the E-60/E-50 with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a mild, non-abrasive detergent. Afterwards, be sure to wipe the instrument thoroughly with a soft, dry cloth.
- Never use benzene, thinner, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Repairs and data

- Please be aware that all data contained in the instrument's memory may be lost when it is sent for repairs. In certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data. Roland assumes no liability concerning such loss of data.

Additional precautions

- Please be aware that the memory contents can be irretrievably lost as a result of a malfunction or the improper operation of the instrument.
- Use a reasonable amount of care when using the E-60/E-50's buttons, other controls and jacks/connectors. Rough handling can lead to malfunctions.

- Never strike or apply strong pressure to the display.
- When connecting/disconnecting cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts or damage to the cable's internal elements.
- A small amount of heat will radiate from the E-60/E-50 during normal operation. This is perfectly normal.
- To avoid disturbing your neighbors, try to keep the E-60/E-50's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially late at night).
- When you need to transport the E-60/E-50, package it in the box (including padding) that it came in. Otherwise, you will need to use equivalent packaging materials or a flightcase.
- Use only the specified expression pedal (EV-5, EV-7; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the E-60/E-50.

About the touch screen

- Wipe off stains on the touch screen using ethanol, but do not allow the ethanol to soak into the joint of the upper fume and the bottom glass, for it may cause peeling or malfunction. Do not use organic solvents or detergents other than ethyl alcohol (ethanol).

Before using floppy disks (handling the floppy disk drive)

- Install the E-60/E-50 on a solid, level surface in an area free from vibration. If the unit must be installed at an angle, be sure the installation does not exceed the permissible range: upward, 2°; downward, 18°.
- Avoid using the E-60/E-50 immediately after it has been moved to a location with a level of humidity that is greatly different than its former location. Rapid changes in the environment can cause condensation to form inside the drive, which will adversely affect the operation of the drive and/or damage floppy disks. When the unit has been moved, allow it to become accustomed to the new environment (allow a few hours) before operating it.
- To insert a disk, push it gently but firmly into the drive—it will click into place. To remove a disk, press the EJECT button firmly. Do not use excessive force to remove a disk which is lodged in the drive.
- Never attempt to remove a floppy disk from the drive while the drive is operating (the indicator is lit); damage could result to both the disk and the drive.
- Remove any disk from the drive before powering up or down.
- To prevent damage to the disk drive's heads, always try to hold the floppy disk in a level position (not tilted in any direction) while inserting it into the drive. Push it in firmly, but gently. Never use excessive force.
- To avoid the risk of malfunction and/or damage, insert only floppy disks into the disk drive. Never insert any other type of disk. Avoid getting paper clips, coins or any other foreign objects inside the drive.

Handling floppy disks

- Floppy disks contain a plastic disk with a thin magnetic coating. Microscopic precision is required to enable storage of large amounts of data on such a small surface area. To preserve their integrity, please observe the following when handling floppy disks:
  - Never touch the magnetic medium inside the disk.
  - Do not use or store floppy disks in dirty or dusty areas.
  - Do not subject floppy disks to temperature extremes (e.g., direct sunlight in an enclosed vehicle). Recommended temperature range: 10°~50°C (50°~122°F).

- Do not expose floppy disks to strong magnetic fields, such as those generated by loudspeakers.
- Floppy disks have a "WRITE" tab which can protect the disk from accidental erasure. It is recommended that the tab be kept in the PROTECT position and moved to the WRITE position only when you wish to write new data onto the disk.

Rear side of the disk

WRITE
(you can save data to the disk)

Protect tab

PROTECT
(you cannot save data)
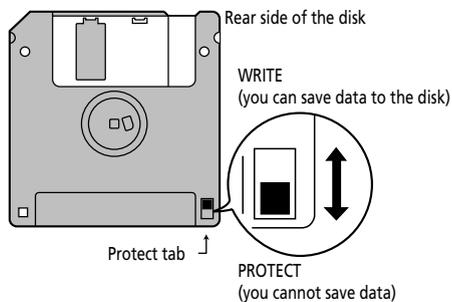
- Disks containing important performance data for this instrument should always be locked (have their write protect tab slid to the PROTECT position) before you insert them into the drive of another device.
- The identification label should be firmly affixed to the disk. If the label comes loose while the disk is in the drive, it may be difficult to remove the disk.
- Put the disk back into its case for storage.

Memory Backup

- If the power to this unit is not switched on for an extended period of time, the contents of memory will be lost and the unit will revert to its factory defaults. To avoid the loss of important data that has been placed in memory, a backup of your data should be periodically created (see p. 184).

Before using memory cards

- Some data cards are equipped with a PROTECT switch, which when turned on protects your data from accidental erasure. (The E-60/E-50 also has such a switch.) It is recommended that the switch be kept at the ON position and switched to OFF only at the times you wish to write new data onto the card.

On ←→ Off

- This unit's memory card slot accepts CompactFlash and Smart-Media™ (3.3V) memory cards. Microdrive storage media are compatible. (You need a commercially available adapter plug for SmartMedia™ cards.)
- Carefully insert the memory Card all the way in—until it is firmly in place.
- Never touch the terminals of the memory card. Also, avoid getting the terminals dirty.
- CompactFlash and SmartMedia (3.3V) cards are constructed using precision components. Handle the cards carefully, paying particular note to the following.
  - To prevent damage to the cards from static electricity, be sure to discharge any static electricity from your own body before handling the cards.
  - Do not touch or allow metal to come into contact with the contact portion of the cards.
  - Do not bend, drop or subject cards to strong shock or vibration.
  - Do not keep cards in direct sunlight, in closed vehicles or other such locations (storage temperature: –25~85°C).
  - Do not allow cards to become wet.
  - Do not disassemble or modify the cards.

- Never remove the memory card or turn off the power while an operation –such as reading or writing data or formatting– is being performed on the memory card. Doing so can destroy the data on the memory card and/or render the memory card itself unusable.
- If you affix the write-protect label to the write-protect area of a SmartMedia™ card, you will not be able to format the card or write data to it. If you wish to format the card or write data to it, do so without the label affixed. For details on the write-protect sticker, refer to the owner's manual for your memory card.
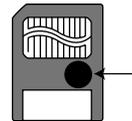
- If you attempt to format a card or write data to it when the write-protect label is affixed, an error message will appear. In that case, either insert another card or remove the write-protect label.
- At power-on, do not remove/insert a card while the E-60/E-50 is updating its internal data (wait until the messages "Song database checking..." and "User Program database checking..." have disappeared).
- Never turn on the power when a memory card is inserted partway into the slot. Doing so will damage the data in internal memory.

Memory cards usable with the E-60/E-50

- The E-60/E-50 can use commercially available CompactFlash and SmartMedia memory cards. You can purchase such cards at a computer shop or digital camera dealer.
- Memory cards you purchase must meet the following conditions.
  - Power supply voltage: 3,3V
  - Capacity: 4, 8, 16, 32, 64, 128, 256, 512MB, 1GB, 2GB, 4GB (2GB and 4GB only with Microdrive)
- The E-60/E-50 cannot use cards of types other than the above.

Electromagnetic radiations

- Electromagnetic radiations may cause a deterioration of audio performances. Such possible deterioration consists in an audio signal being emitted. On ceasing the electromagnetic noise, the emission of the audio signal will simultaneously stop.

Liability and copyright

- Unauthorized recording, distribution, sale, lending, public performance, broadcasting or the like in whole or in part, of a work (musical composition, video, broadcast, public performance or the like) whose copyright is held by a third party is prohibited by law.
- Do not use this unit for purposes that could infringe on a copyright held by a third party. Roland assumes no responsibility whatsoever with regard to any infringements of third-party copyrights arising through your use of this unit.

- SmartMedia is a trademark of Toshiba Corp.
- Compact Flash and are trademarks of SanDisk Corporation and licensed by CompactFlash association. Roland Corporation is an authorized licensee of the CompactFlash™ and CF logo trademarks.
- All product names mentioned in this document are trademarks or registered trademarks of their respective owners.

1. **Panel descriptions**

Front panel

Note: You can press and hold most buttons to jump to an associated display page.
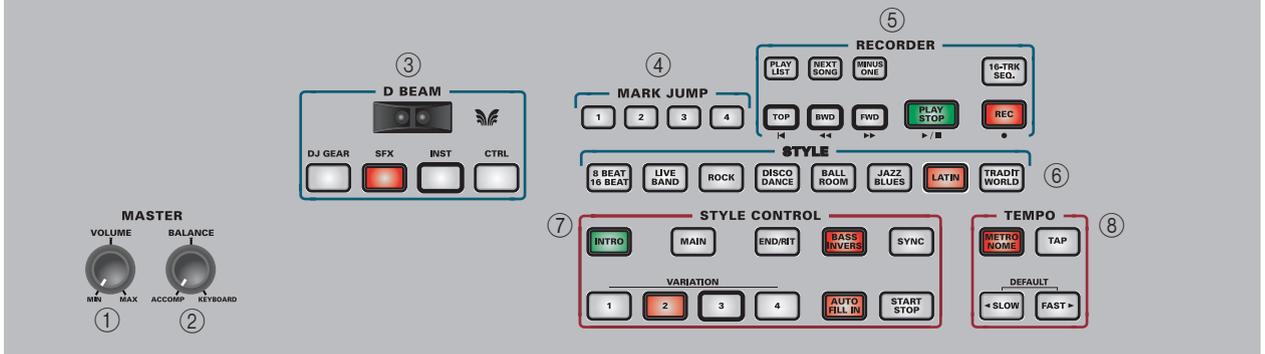
① **MASTER VOLUME knob**
Use this knob to set the E-60/E-50's global output volume (all sections). The setting of this knob also determines the volume in the headphones you may have connected.

② **MASTER BALANCE knob**
This knob allows you to set the balance between the Arranger or song parts ("ACCOMP") and the solo sounds ("KEYBOARD").

③ **D Beam controller (E-60)**
This controller allows you to influence the timbre of the notes you play, to control song playback and to create some unique effects. All you need to do is move your hand up/down or left/right above the two "eyes".
The buttons below it allow you to assign the desired function to the D Beam controller. See p. 51.

④ **MARK JUMP section**
These buttons ([1]~[4]) allow you to jump to one of four stored locations inside the currently selected song. You can program the desired locations for songs that do not yet contain them.

⑤ **RECORDER section**
[PLAY LIST] button: Press this button to access the display where you can select a list of songs to be played back, edit existing lists, program new ones, etc. When the indicator of this button lights, [I◄], [◄], [►►], [PLAY/STOP ►/■] are used to control playback of the current song.
[NEXT SONG] button: You can already load a new song while the current Standard MIDI File is still playing. If you want the Recorder to start playback of the

newly selected song automatically, press this button. If the [PLAY LIST] button lights, this button allows you to select the next song of the selected List.
[MINUS ONE] button: Press this button to switch off the part you want to play (or sing) yourself. The part to be muted is selectable (page 38).
[16-TRK SEQ.] button: Press this button to access the E-60/E-50's sequencer (MIDI recorder). This sequencer goes way beyond anything you may know from previous Roland arranger instruments (see p. 123).
[I◄], [◄◄], [►►], [PLAY/STOP ►/■]: These buttons allow you to return to the beginning of the current song, "rewind" or "fast-forward" in one-measure steps and to start and stop playback of the selected song. Press the [REC ●] button to record a new song (see p. 41).

⑥ **STYLE section**
These buttons allow you to select one of the 8 Music Style families. The button of the selected family lights.

⑦ **STYLE CONTROL section**
Use these buttons to select the desired Music Style pattern and to start/stop Music Style playback (see p. 22).

⑧ **TEMPO section**
[METRONOME] button: Press this button to switch the internal metronome on or off.
The remaining buttons ([TAP], [◄SLOW], [FAST►]) allow you to set the tempo of the metronome, the Arranger or the recorder/sequencer.

⑨ **MUSIC ASSISTANT button**
Press this button to access the MUSIC ASSISTANT environment where you can select Music Style registrations for a given song you want to play. You can also program your own Music Assistant registrations.

⑩ **LYRICS & SCORE button**
Press this button if you want the lyrics contained in the songs to appear in the display. At the same time, the chords of the notes played by the song parts will also be displayed. This, however, is information that is "extracted" (derived) in realtime by the E-60/E-50. This function can even display the notes of the selected part as a score.

⑪ **MIXER button**
This button provides access to display pages where you can set the level, pan and effects send levels of the E-60/E-50's parts (KEYBOARD, SONG and STYLE).

⑫ **DISK & MEDIA button**
Press this button if you wish to save/load data from the internal memory, a floppy disk, or PCM/CIA card. You will also find data management functions here, like deleting files, formatting floppies or cards, etc. (page 175).

⑬ **LCD CONTRAST knob**
Use this knob to adjust the display's contrast if it is difficult to read. The display itself is a touch screen and therefore needs to be clear at all times (so that you know what you are doing).

Note: The display may take some time to warm up. That is why you may have to change the contrast several times after powering on.

⑭ **COVER button**
This button provides access to pre-programmed templates that allow you to quickly modify a song's or Music Style's character. Press it once or twice to select the Song or Style level. See pages 38 and 63.

⑮ **MAKEUP TOOLS button**
Press this button to modify the settings of the current song or Music Style, if the pre-programmed Cover settings do not provide what you're looking for. See page 102.

⑯ **MENU button**
Press this button to call up a menu that provides access to more in-depth E-60/E-50 functions you may only wish to set from time to time.

⑰ **EXIT button**
Press this button to return to the previously selected display page or the E-60/E-50's main page.

Note: You can press and hold most buttons to jump to an associated display page.
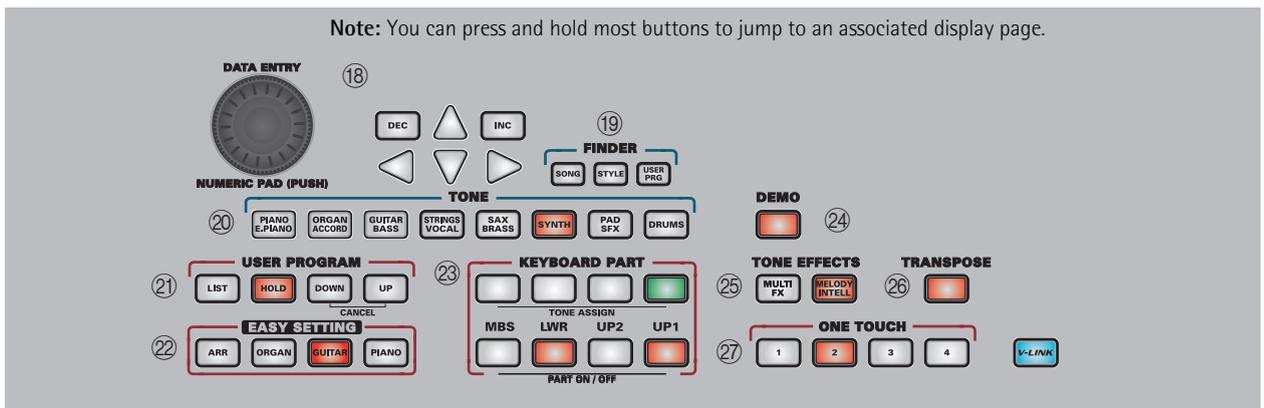
⑱ **DATA ENTRY section**

The dial can be used to set the value of the parameter field that is currently highlighted. Turn it to scroll through the available settings. You can also press it to call up a numeric key pad that allows you to enter the desired value by pressing the corresponding fields in the display.

To change the selected value in small steps, press DEC (lower value) or INC (higher value). The ▲▼►◄ buttons are used to select a parameter for editing (something you can also do by pressing the corresponding display field).

While the main page is displayed, the DATA/ENTRY dial and DEC/INC buttons also allow you to set the tempo.

⑲ **FINDER section**

Press one of these buttons to quickly locate songs (SONG), Music Styles (STYLE) or User Programs (USER PRG) in the internal memory, on floppy disk or an external memory card. See pages 35, 73 and 90.

⑳ **TONE section**

The TONE buttons allow you to select one of 8 internal Tone families. You can then use the display to specify the desired sound within that family.

㉑ **USER PROGRAM section**

These buttons allow you to select the desired User Program (registration memory). Press the LIST button to call up the display page where you can select the desired User Program and save your current panel settings to a User Program.

You can also select the previous (DOWN) or next (UP) User Program. By pressing these two buttons simultaneously, you leave the User Program environment.

The HOLD button allows you to ignore several settings of subsequently loaded User Programs (see p. 92).

㉒ **EASY SETTING section**

This key pad allows you to reconfigure the E-60/E-50 by pressing just one button: ARR (use the Arranger in split mode), ORGAN (the name says it all), GUITAR (select the E-60/E-50's Guitar Mode,), and PIANO (assign a piano sound to the entire keyboard). See also page 45.

㉓ **KEYBOARD PART section**

The TONE ASSIGN buttons are used to specify the Keyboard part you wish to assign a different sound to page 27. "Keyboard parts" are the parts you can play yourself. The E-60/E-50 contains many other parts that are played "automatically" by the Arranger or Recorder.

The PART ON/OFF buttons allow you to switch the desired Keyboard parts on and off.

㉔ **DEMO button**

Press this button whenever you want to listen to the E-60/E-50's demo songs (see p. 20).

㉕ **TONE EFFECTS section**

Press the MULTI FX button to add a different effect to the Keyboard parts (page 84). (This processor is also available for the D Beam and the MELODY INTELL parts.)

Note: The D Beam controller and part are only available on the E-60.

Press the MELODY INTELLIGENCE button (so that it lights) to add an automatic counter-melody (second and third voice) to your solos or melodies (see p. 62).

㉖ **TRANSPOSE button**

Press this button to transpose the E-60/E-50 up or down in semitone steps using the controls shown in the display. You can also specify which parts are to be transposed (page 48).

㉗ **ONE TOUCH section**

These buttons allow you to select the desired One Touch memory. There are four memories per internal Music Style and the 80 Custom memories. They work a lot like the User Programs, because they assign different sounds and effects settings to the Keyboard parts and carry out some other changes. See page 65.

㉘ **V-LINK button**

Press this button to take advantage of the E-60/E-50's V-LINK functionality for controlling video material via certain performance functions and the right-most keys on the E-60/E-50's keyboard. By using V-LINK-compatible video equipment, visual effects can be easily linked to and made part of the expressive elements of a performance. By connecting the E-60/E-50 to an optional Edirol DV-7PR or V-4, you can switch images in synchronization with music or use the E-60/E-50's performance functions or right-most keys to switch clips, control playback speed, etc.

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㉙ POWER ON button

Press this button to switch the E-60/E-50 on and off. If you need to turn off the power completely, first turn off the power switch, then unplug the power cord from the wall outlet. Refer to "Switching the E-60/E-50 on/off" on p. 19.

㉚ BENDER/MODULATION lever

When pushed towards the back of the E-60/E-50, this lever will add modulation to the notes of the Keyboard parts you are playing at that time. Move it to the left or right to temporarily lower or increase the pitch of the Keyboard part notes you are playing. For the sounds of the TONE ORGAN family, you can use the Modulation axis to alternate between the fast and slow Rotary speeds.

㉛ PHONES 1 &2 sockets

This is where you can connect two pairs of optional headphones (Roland RH-25, RH-50, RH-200 or RH-300).

㉜ Floppy disk drive

This is where you can insert 2DD or 2HD floppy disks for external storage of your Music Styles, Recorder songs, User Programs, and MIDI Sets. Press the eject button to remove the disk from the drive.

Note: Do not remove the floppy disk while the E-60/E-50 accesses the disk (to load/save data, etc.). Doing so may damage both the floppy disk and the drive's head.

Rear panel
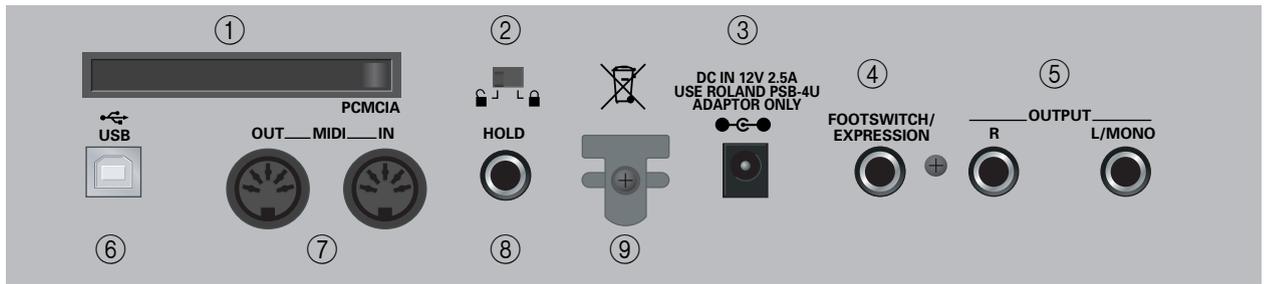
① **PCMCIA slot**
This is where you can insert a memory card (PCMCIA, CompactFlash, SmartMedia™ or Microdrive). Memory cards that are not PCMCIA cards can only be connected if you use an appropriate adapter (available at your computer store). See also the precautions on p. 12.

② **Internal memory protect switch**
This switch allows you to lock (🔒, protect) and unlock (🔓) the internal memory. See page 19.

③ **DC IN connector**
This where you need to connect the supplied PSB-4U adapter. If it is damaged or out of order, be sure to replace it with the same PSB-4U model. Do not use other adapters as these may damage your E-60/E-50 beyond repair.

④ **FOOTSWITCH/EXPRESSION socket**
Connecting an optional DP-2, DP-6 or FS-5U to this socket allows you to control an assignable function by foot.

Alternatively, you can connect an optional Roland EV-5 or FV-300L expression pedal to this socket that can be used for setting the volume of the selected parts by foot.

⑤ **OUTPUT R, L/MONO sockets**
These sockets need to be connected to an external amplifier, mixing console, etc. They transmit the music generated by the Arranger, Recorder and Keyboard parts.

⑥ **USB port**
The USB port can be used for archiving purposes and MIDI data transfer from/to a computer.

⑦ **MIDI OUT/IN sockets**
These sockets allow you to connect the E-60/E-50 to external MIDI devices for a variety of applications: receiving song data in realtime from an external sequencer, transmitting your playing (and the data of the song you are playing back) to an external sequencer, using the E-60/E-50 as master keyboard in your MIDI setup, etc.

Note: The MIDI functions can be accessed via the E-60/E-50's Menu (page 187). Frequently used MIDI settings can be written and recalled as "MIDI Sets".

⑧ **HOLD socket**
An optional DP-2, DP-6, or BOSS FS-5U footswitch connected to this socket can be used for holding the Keyboard-part notes. (The Melody Intell part can also be sustained in this way.) This function is also referred to as "Sustain" or "Damper".

⑨ **Cord hook**
After connecting the adapter cable, wind it around the cord hook to the right of the socket to prevent accidental power disruptions.

2. Setting up and demo songs

You must be dying to try out your new E-60/E-50 to see what it is capable of. We'll get to that in a minute. But first we need to connect it.

Connections

The E-60/E-50 contains internal speakers. You therefore don't need to connect it to an external amplifier (Roland's KC series, for example). But you can also use optional headphones (Roland RH-25, RH-50, RH-200 or RH-300, for example).

Be sure to switch off both the E-60/E-50 and the external devices you want to connect before making or breaking audio and/or MIDI connections. If you do not have access to the sound system of the venue where you are performing, ask the local engineer to set the volume to the minimum level.
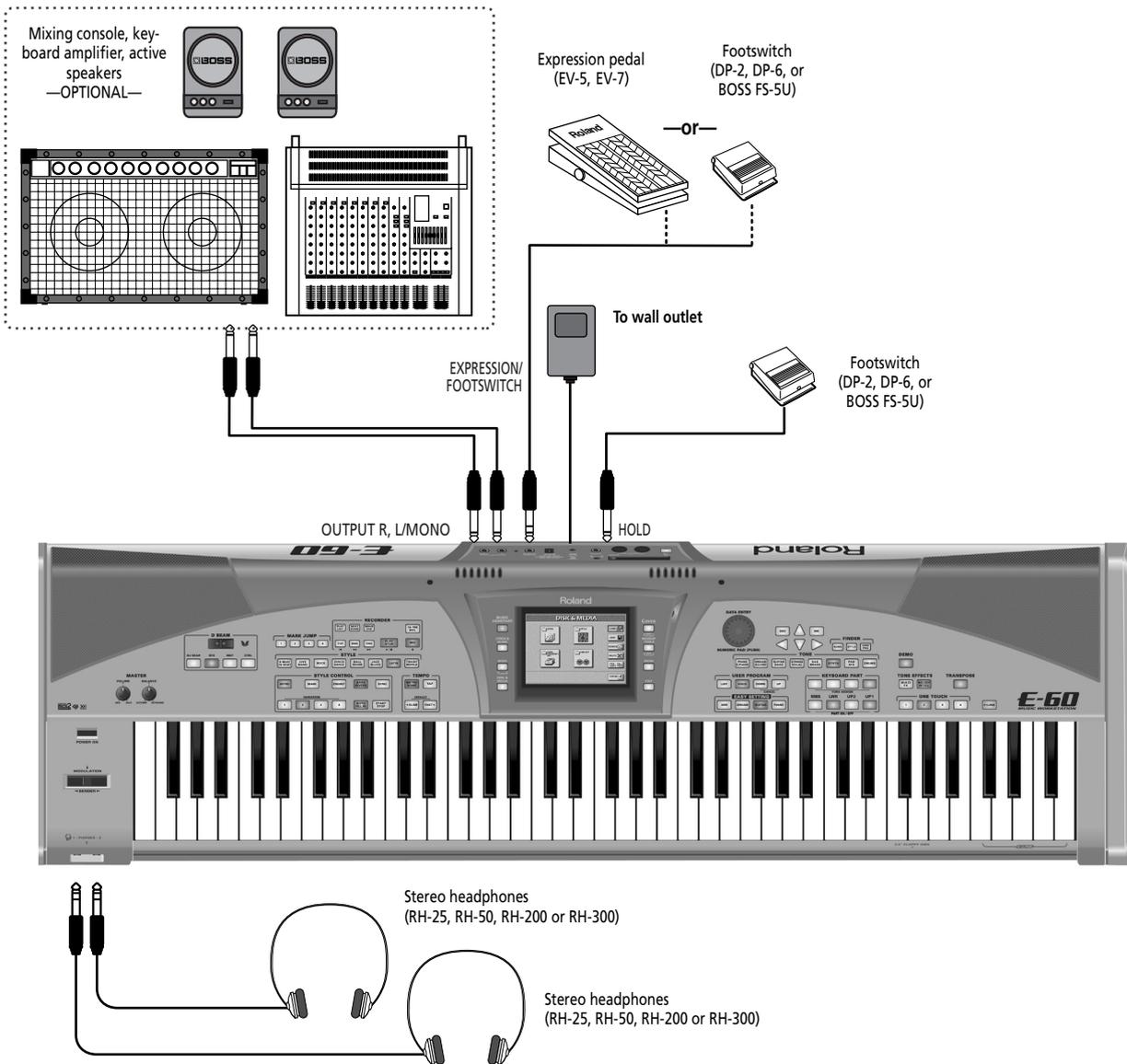
Note: Except for the adapter, all other items shown above are optional. See your Roland dealer for details.

Switching the E-60/E-50 on/off

After connecting the E-60/E-50 to the other devices, proceed as follows:

Internal Memory Protect
After unpacking your E-60/E-50 –and before switching it on–
you need to defeat the protection of its internal memory (a
solid-state hard disk) if you intend to save data in the internal
memory.

• Slide the switch to the "🔓" position to unlock the memory.
  (To once again lock the internal memory, slide the switch
  back to the "🔒" position.)
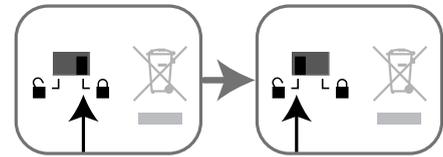
Switching on the E-60/E-50

(1) Insert the included power cable into the AC inlet and
    then plug it into an electrical outlet.
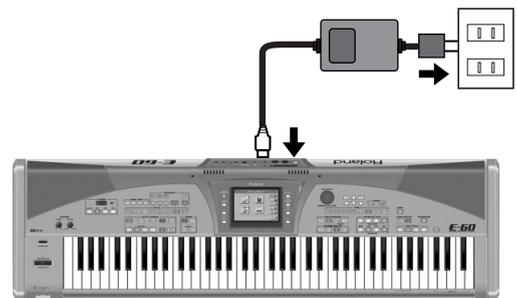
(2) Press the E-60/E-50's POWER ON button located to
    the left of the keyboard to switch it on.

(3) If you connected the E-60/E-50 to a mixing console, switch it on now.

(4) Switch on the amplifier, your active speakers or the keyboard amplifier(s).

(5) Use the MASTER VOLUME knob to set the E-60/E-50's
    output volume.
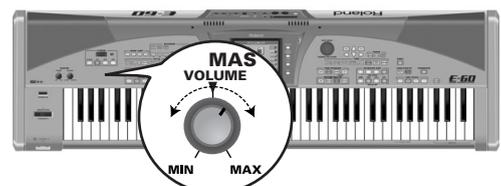
Setting the display contrast

The information in the LCD display may be difficult to view
after turning on your E-60/E-50 or after extended use. Your
viewing angle or the current lighting conditions can also
affect the appearance of the display.

In such cases, use the LCD CONTRAST knob to the left of
the display to adjust the contrast.

Switching off the E-60/E-50

(1) Switch off all external devices.

(2) Use the E-60/E-50's POWER ON button to switch it off.
    Note: If you need to turn off the power completely, first turn off the POWER switch, then unplug the power cord from the power outlet.
    Be sure to wait 2~3 seconds before switching the E-60/E-50 back on.

Interactive demo of the E-60/E-50

Your E-60/E-50 contains an interactive demo that introduces all of its highlights. It might be a good idea to try it out now. The demo is self-explanatory, so we'll just show you how to start and stop it.

(1) Press the DEMO button.
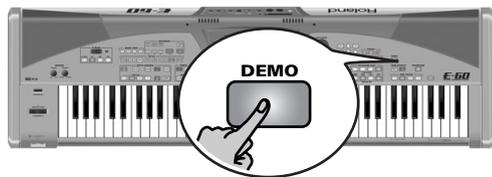
The display changes to:

(2) If necessary, press the LANGUAGE field and select the language for this interactive demo function.

(Press CLOSE if you didn't mean to select this page. The current language selection will not change.)

(3) Press the field that provides access to the desired demo function.
There are 8 sound and 8 Style demo songs.

(4) If you can barely hear the music, set the VOLUME knob (far left, MASTER section) to a higher level.

(5) To stop the demo and leave the E-60/E-50's Demo function, press the DEMO, RECORDER PLAY/STOP ▶/■ or the EXIT button.

The main page

When you leave Demo mode (or any other display page) or if you do not change any of the E-60/E-50's settings, the display looks more or less as follows:
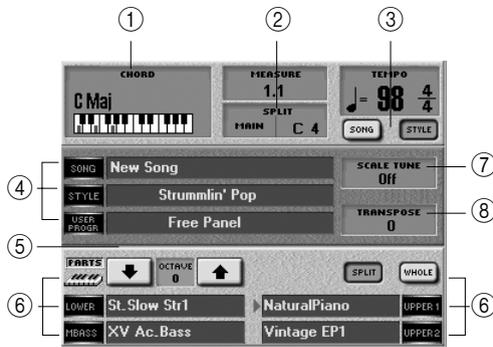
The information shown here depends on the E-60/E-50's current settings, the data you loaded, etc., but the above illustration should be fairly close to what you see on your instrument.

Almost all information displayed is assigned to fields you can press to jump to a different page, set a parameter or select a parameter for editing.

Pressing field ①, for instance, takes you to the ARRANGER SETTING page. Press ② if you want to change the split point settings.

The SONG and STYLE buttons ③ look different and therefore also behave differently: press one of them to select the section whose tempo should be displayed. (You can change the tempo value of the selected section using the ◄SLOW FAST► and TAP buttons after stopping playback.) They do not allow you to switch from Style to Song mode, however, because that is handled automatically – depending on whether the PLAY/STOP ►/■ or START/STOP button currently lights.

Note: While on the main page, you can also set the tempo using the DATA/ENTRY dial and the DEC/INC buttons.

The fields indicated by ④ take you to a page where you can select songs (SONG), Music Styles (STYLE) or User Programs (USER PROG). These fields have the same functions as the buttons of the same name in the FINDER pad.

The OCTAVE button icons ⑤ allow you to shift the tuning of the currently selected Keyboard part (indicated by an arrow). To select a Keyboard part, press its TONE ASSIGN button.

The remaining fields ⑥ allow you to select the Keyboard part you wish to assign another sound to and recalls the TONE SELECT page. They duplicate the functions of the (KEYBOARD PART) TONE ASSIGN buttons.

The SCALE TUNE field ⑦ takes you to a page where yo can change the tuning of the E-60/E-50's notes (so as to be able to use Arabic scales, for example).

The TRANSPOSE field ⑧, finally, calls up the display page where you can transpose one, several or all sections (this depends on the mode you select on that page). This field duplicates the function of the TRANSPOSE button.

When the E-60/E-50's Guitar mode is on, the display looks as follows:

Pressing the ⑨ field takes you to the GUITAR MODE page. Note that this field can either contain an electric guitar or an acoustic one to indicate the kind of instrument you selected.

This field duplicates the function of the GUITAR button.

As you see, there is a lot you can control without having to wade through endless menus.

Note: If the main page does not appear automatically, you can return to it by pressing the EXIT button once or several times.

General note about the E-50's menu

When you press the E-60's MENU button, the display looks as follows:
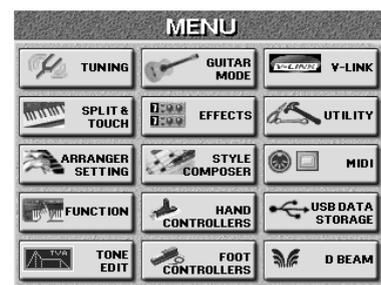
The E-50, on the other hand, doesn't have a D Beam controller, which is why its MENU page looks as follows:

3. Quick Start

In this chapter, we will scratch the surface and walk you through the major functions.

The general idea

Your E-60/E-50 is several instruments in one. There are three main sections you can use for playing live.

① **Keyboard parts:**
This section consists of parts you need to play via the keyboard, hence the name "Keyboard". The E-60/E-50 provides five Keyboard parts, four of which can be used simultaneously: UP1, UP2, LWR and MBS. "UP" stands for "Upper" and refers to the right half (if there is a split). "LWR" refers to "Lower" and thus to the left half. "MBS" is short for "Manual Bass", i.e. a monophonic bass part whose notes depend on the chords you play.

There is no Manual Drum part, because any of the parts just mentioned can be used to play a Drum Set. The fifth part, "MELODY INT", is what computer buffs would call a "cross-platform part": it belongs to the Keyboard section but it is in part controlled by the Arranger. See "Melody Intelligence" on page 62.

② **Arranger/Style section:**

Left hand: | Right hand: melody
Arranger control | (Keyboard parts)

Left hand: | Right hand: melody
Arranger control | (Keyboard parts)
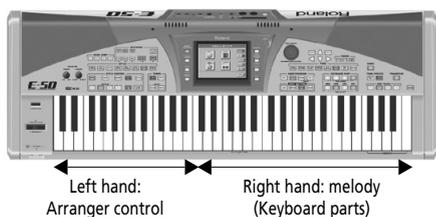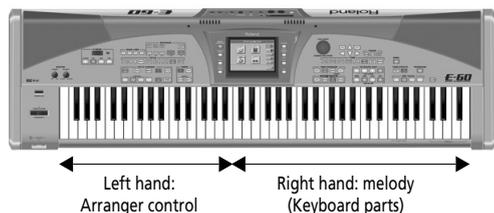
The Arranger is your backing band. It plays an accompaniment (called *Music Style*). In a way, the Arranger works like a drum machine because it uses accompaniment patterns.

Unlike a drum machine, however, you can easily select the desired pattern while playing. So you do not need to program the order in which you intend to use the patterns. Furthermore, the Arranger not only provides a rhythm section but also chords, guitar and synthesizer riffs and so on. The accompaniment can be transposed in realtime. All you have to do is play a different chord (usually with your left hand).

③ **Recorder section:**
That's how it's called on the front panel, so we'll stick to it. This section actually encompasses a 16-track sequencer, a straightforward MIDI recording function and a very sophisticated Standard MIDI File player with a host of all realtime control functions.

Playing to an automatic accompaniment

Let us begin with the automatic accompaniment function, which is called "Arranger" and often referred to as "Style" in the display and on the front panel.

The Arranger is an interactive "playback sequencer" that provides the accompaniments. These accompaniments are called "Music Styles", because the musical phrases ("patterns") they play concentrate on a given musical genre (Rock, Pop, Dance, Waltz, etc.).

The Arranger allows you to transpose the melodic accompaniment parts (bass, piano, guitar, etc.) simply by playing chords. In most instances, you will probably do so with your left hand. Each Music Style comprises several patterns, so that you can vary the accompaniment by starting with an introduction, using a simple accompaniment for the verses, a more elaborate one for the choruses and by ending your songs with an "Ending" pattern.

Let us first look at the most important aspects for operating the Arranger:

(1) Connect and switch on the E-60/E-50 (see pages 18 and 19).

(2) Press the EASY SETTING ARR button.
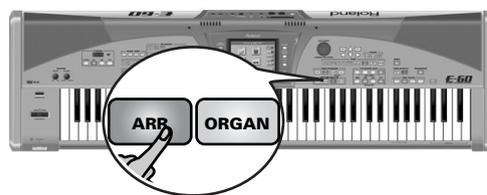
The button lights and the keyboard is split into two halves. The left half can be used to play chords, while you can play melodies in the right half.

(3) If the SYNC button lights (which is probably the case), press it to switch it off.
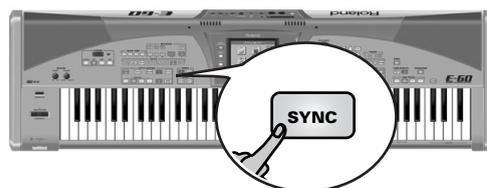
(4) Set the MASTER VOLUME knob to a reasonable level (e.g. about "1/4").

(5) Press the MAIN button (it lights).
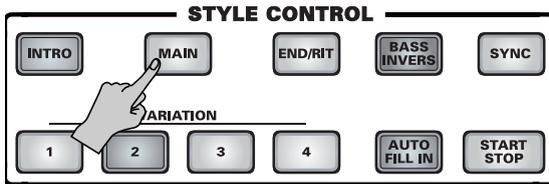
(6) Play a chord in the left half of the keyboard, then press the STYLE CONTROL START/STOP button.

The START/STOP button lights and the Arranger starts playing the accompaniment of the currently selected Music Style (called "Strummlin' Pop").

The accompaniment pattern is sounded in the key that corresponds to the note you played (C). The name of the corresponding chord is displayed in the upper left-hand corner of the display:

Note: See "Song/Arranger Start Priority" on p. 196 if Arranger playback does not start.

(7) Play another chord in the left half of the keyboard. The same pattern is now played in that key. You don't even have to play full chords:

• For *major* chords, playing just the root note is enough (e.g. "C" for C major, "A" for A major, etc.)

• For *minor* chords, playing the root note and the third key to its right will do.

• For *seventh* chords, playing the root and the second key to its left is enough.
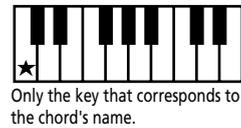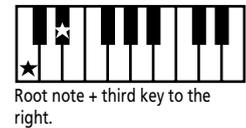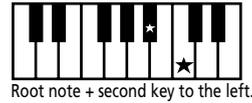
Note: The function that takes care of this easy fingering is called "INTELLIGENT" (page 67). See also p. 209 for a list of other chords that can be played using this system (augmented, diminished, etc.).

What you hear now is the "MAIN 1" pattern (the MAIN and VARIATION 1 buttons light). This is the simplest accompaniment of the selected Music Style. Let's listen to the accompaniment you could use for your choruses:

(8) Press the VARIATION 2 button (the MAIN and 1 buttons light and 2 flashes).
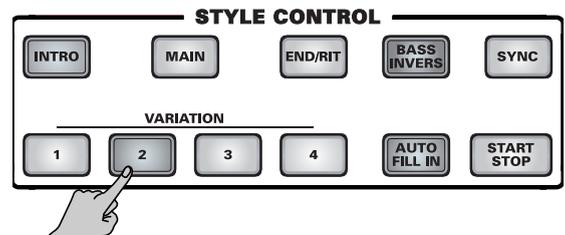
At the end of the VARIATION 1 pattern, the VARIATION 2 button lights steadily and the Arranger plays a different accompaniment.

(9) Now try out Variations 3 and 4.

Professional transitions: Fill In
So far, we have only used the main accompaniment patterns (i.e. the phrases that are repeated over and over until you stop the Arranger).

The various variations can be used for verses (1), second verses (2), choruses (3 & 4) and other song parts. Switching between these patterns is a matter of pressing the VARIATION 1~4 buttons. Yet, that produces instant changes of the accompaniment, while "real" musicians tend to "announce" new song parts by means of roll in the drums or slightly different accompaniment notes.

The E-60/E-50 allows you to make such "announcements" in the following way:

(1) Start playback of the MAIN 1 pattern (see above).

(2) Play a chord in the left half of the keyboard.

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(3) Press the [AUTO FILL IN] button (it lights).
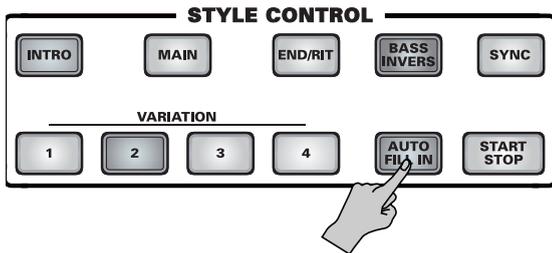
(4) Press a VARIATION [1]~[4] button to select another MAIN pattern.

The [MAIN] button and the selected VARIATION [1]~[4] button flash.

What happens now depends on *when* you press this button:

- If you press it on any beat before the last of the current bar, the Arranger plays a Fill-In pattern that lasts *until the end of the current bar*. It then changes to the newly selected pattern (at which point [MAIN] and the selected numeric VARIATION button light steadily).

- If you press it on the last beat of the current bar, the Fill-In will start *on the next downbeat and last an entire bar*, after which the Arranger automatically selects the new pattern.

  If you press the same numeric button ([1]~[4]) again, the Fill-In is played according to the above rules. But when it finishes, the Arranger returns to the pattern you had been using up to that point.

(5) Switch off the [AUTO FILL IN] button if you do not want the next pattern change to be preceded by a Fill-In.

Note: The length of a Fill-In can be halved. See "Half Bar on Fill In" on p. 55.

Intro & Ending

Now that we've got the transitions covered, you may start wondering how to create more professional intros for your songs – and how to end them in style. That is what the [INTRO] and [END/RIT] buttons are for.

While the MAIN patterns keep repeating the same accompaniment until you select another one or until you stop Arranger playback, Fill-Ins (see above), Intros and Endings are played only once.

Once the INTRO pattern is finished, the Arranger automatically proceeds with the MAIN [1]~[4] pattern (depending on which button flashes). At the end of the *Ending* pattern, however, the Arranger stops.

(1) Stop Arranger playback by pressing the [START/STOP] button (it goes dark).

(2) Play a chord in the left half of the keyboard to specify the key of the Intro pattern.

(3) Press the [INTRO] and the numeric button [1]~[4] that corresponds to the Intro pattern you want to use.
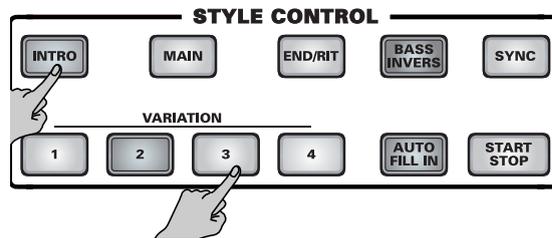
(4) Press the [START/STOP] button to start Arranger playback.

The Arranger plays the introduction of the currently selected Music Style. The "MEASURE" field on the main page now counts backwards ("–4", "–3", etc.) to indicate the Intro's duration. If you like, you can now try out the remaining three Intro patterns by pressing [INTRO] and [1]~[4]. The number refers to the degree of complexity.

Note: Do not play while the Intro is running. Most Intro patterns indeed contain chord changes, so that playing different chords may lead to highly annoying results.

During Arranger playback, the [START/STOP] button flashes red on the downbeat and green on the remaining beats of the bars to indicate the tempo. While the Arranger is stopped, this visual tempo indication is provided by the [METRONOME] button (that only flashes in red, though).

(5) Press one of the VARIATION [1]~[4] buttons to select the pattern that should be played after the Intro is finished (the button flashes).

By pressing [MAIN] at this stage, you leave the Intro pattern on the next downbeat (i.e. before the Intro phrase is finished).

(6) Wait until the selected MAIN pattern is playing, then press the [END/RIT] button.
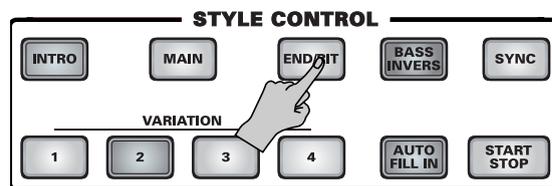
At the end of the current pattern cycle, the Arranger starts playing the Ending pattern and then stops. While the Ending phrase is playing, the "MEASURE" field on the main page counts backwards ("–4", "–3", etc.) to indicate the pattern's duration.

Again, there are four Ending phrases to choose from. If you don't press a numeric button [1]~[4] after switching on [END/RIT], the Arranger automatically uses the ENDING phrase that corresponds to the MAIN number you have been using up to that point.

Note: Here again, it would be wiser not to play chords while the Ending phrase is running.

Note: See "Additional Arranger/Style functions" on p. 60 for more Arranger functions.

Selecting Music Styles

So far, we have been using only one Music Style (the one that is selected automatically at power-on). Here is how to select a different accompaniment:

(1) Press a button of the STYLE pad to select a Music Style family.
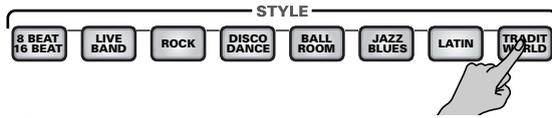
The indicator of that button lights and the display looks as follows:

The display shows a list of 10 Music Styles available for the family you selected. If the name of the desired Style is not displayed…

(2) Use the PAGE 1~PAGE 4 fields to switch pages.

The number of pages depends on the selected family. Some families have only one page, while others may have two, three or four.

(3) Press the field of the Music Style you want to use.

If the Arranger is running while you select another Style, the new Style starts on the next downbeat.

(4) Press the EXIT button to return to the main page.

Changing the tempo

If the accompaniment is too fast (or too slow), here is how to change the Music Style tempo:
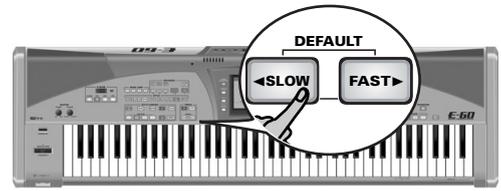
(1) Press ◄ SLOW to decrease the tempo in steps of one unit.

(2) Press FAST ► to increase the tempo in steps of one unit.
On most pages where the tempo is not already displayed, the following popup window appears to confirm the value you have set:

You can also press the TAP button several times to specify the desired tempo. The new tempo is displayed in the upper right-hand corner of the display:

The METRONOME button flashes to indicate the tempo (while Arranger playback is stopped). If Arranger playback is running, the START/STOP button flashes red on the first and green on the other beats of a bar.

(3) To quickly return to the default tempo, hold down ◄ SLOW and simultaneously press FAST ►.

Using the Keyboard parts

Your E-60/E-50 provides 4 "parts" that allow you to play different sounds on the keyboard. Those parts are called "Keyboard parts". Let's add a live melody to the accompaniment.

Playing with an Upper and/or the Lower part

At power-on, the UP1 part is automatically switched on and assigned to the entire keyboard. That is because the E-60/E-50 starts up in EASY SETTING "PIANO" mode.

(1) Press the PART ON/OFF UP1 button if it does not light.
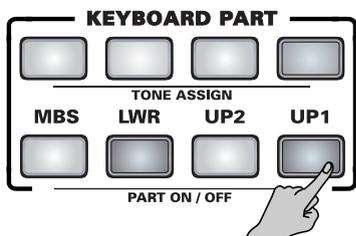
(2) Play a few notes on the keyboard.
The UP1 part's sound is assigned to the entire keyboard.

You could also press the TONE EFFECTS MULTI FX button to add an appropriate effect to the Keyboard parts you are using (here UP1). See page 84 for details.

(3) Use the MASTER VOLUME knob to set the E-60/E-50's output volume.

(4) Use the BALANCE knob to set the balance between the accompaniment and your live playing.
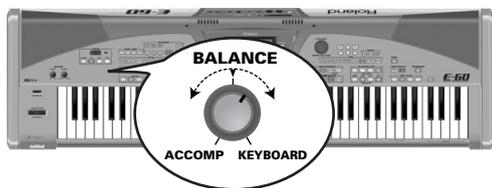
Turn it towards "KEYBOARD" if the notes you play yourself are too soft. Turn it towards "ACCOMP" if your playing is too loud with respect to the Arranger (or song).

Note: See page 81 for how to set the balance between the Keyboard parts.

(5) Press the PART ON/OFF buttons of other Keyboard Parts you want to add (by "layering" them).

Alternating between sounds

The E-60/E-50 allows you to play several sounds simultaneously using the *Keyboard parts*. Other parts are played by the Arranger/Styles and are called *Style parts*. And finally, there are the *Song parts* that are controlled by the Recorder function.

The Keyboard parts can be used together or to quickly alternate between sounds.

Use the PART ON/OFF buttons to select the part(s) you want to play.

You can play several sounds simultaneously (which is called a "layer") or via separate keyboard zones ("split"). Below please find an explanation of the Keyboard parts. (See p. 60 for the Style parts.)

- **UP1** (Upper1): Upper1 is normally the main solo part (and switched on automatically in Piano mode).
- **UP2**: The Upper2 part can be used as additional solo part to be layered with the Upper1 part or as an alternative melody sound. It provides two tuning parameters ("Coarse" and "Fine") Upper1 does not have.
- **LWR**: The Lower part can be assigned to the left half of the keyboard.
- **MBS**: The MBS part supplies a semi-automatic bass line to your left-hand notes if the LWR parts is active. When the LWR button doesn't light, it behaves like any other Keyboard part.
  Note: All Keyboard parts can be used to play drum sounds. Unlike previous Roland arranger instruments, the E-60/E-50 no longer provides a dedicated "Manual Drums" part.
- **MELODY INTELL** (Melody Intelligence): This part is triggered by the Arranger and plays automatic harmonies that are added to the melody you play using the UP1 part. You cannot play that part yourself. That explains why its button not part of the KEYBOARD PART section (it is one of the two TONE EFFECTS buttons). You can choose from among 18 harmony types (page 62).

Selecting sounds for the Keyboard parts
■One Touch
The easiest way to select suitable Tones for the Keyboard parts while working with the Arranger is by using the ONE TOUCH feature. The One Touch memories are in fact small User Programs. See p. 65 for details.

(1) Press the desired ONE TOUCH button.
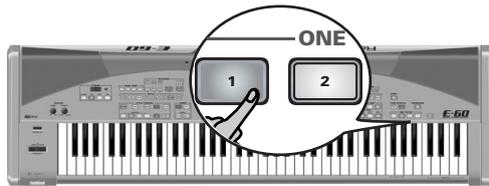
There are four One Touch memories per Music Style (for the 136 factory Styles and 80 CUSTOM memories).

Note: One Touch memories usually switch on the SYNC START function. If you don't want the Arranger to start as soon as you play a note or chord, switch off the $\boxed{SYNC}$ button.

(2) Select a Music Style (page 25) and start Arranger playback by pressing the $\boxed{START/STOP}$ button. Start playing to the accompaniment. You will notice that the sounds of all Keyboard parts match the mood of the selected Style.

(3) Select a different Style and again play a solo line. The active Keyboard part (probably UP1) now uses a different sound (even Keyboard parts that are off change sounds).

(4) Press another ONE TOUCH button to use that registration.

(5) Press the same button again if you no longer need the One Touch setting.

■Choosing sounds manually
The E-60/E-50 contains 1050 Tones (or sounds) and 33 Drum Sets divided over 8 families.

(1) Specify the part you wish to assign another sound or Drum Set to:
• Press the TONE ASSIGN button of the desired part (so that it lights).
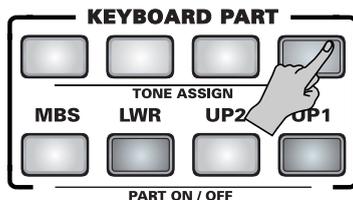
—or—

• On the main page, press the row of the part you wish to assign a different sound to.

In this case, the E-60/E-50 directly jumps to the TONE page that contains the currently selected sound.

The arrow indicates which part is active for Tone selection (its TONE ASSIGN button also lights).

Note: It is also possible to select sounds for Keyboard parts that are currently switched off. This allows you to prepare the next sound(s) while still playing another Keyboard part.

(2) Press a TONE button to select a family and its "best" sound (the sound already changes at this stage).
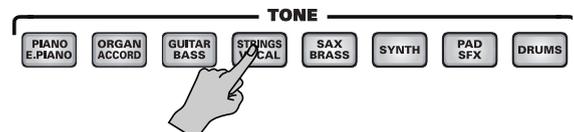
The display shows a list of Tones available in that family:

(3) Press the field of the desired sound. If you don't like it, press another field.
The last sound you select in each family is memorized temporarily and will be recalled every time you press the corresponding TONE button. (That selection can then be changed by pressing another field.)

(4) If you are still not happy with the Tone, use the $\boxed{PAGE\ 1}$~$\boxed{PAGE\ 5}$ and ➡ fields to select the corresponding page (if available).
The ➡ field is only displayed if there are more than five pages. Other Tone families have fewer than five pages. This depends entirely on the Tone family you select.

(5) Press the field of the desired sound.

(6) Press the [EXIT] button to return to the main page.

Next time you select this TONE family, the E-60/E-50 automatically jumps to the page that contains the last sound you selected (and activates it).

About the E-60/E-50's sounds

Try playing the Tones you select at different velocities (strengths) to discover the rich nuances that can be obtained. (See page 50 for details about how to set the velocity sensitivity.)

There is a "JazzScat" sound (VOCAL family), for example, with three dynamic levels that allow you to sound "Doo", "Bub" or "Daow", simply by hitting the keys softer or harder. Various guitar Tones provide hammering-on/bending sounds when you strike the keys as hard as you can.

Transposing the keyboard to the lowest octave (using the OCTAVE parameter) sometimes allows you to play some typical noises (scraping over the strings, hitting the body of an acoustic guitar, etc.).

■ **Choosing the sound selection system (Sound Set Mode)**

The Roland engineers figured that you might feel overwhelmed by the number of Tones available in each TONE family. That is why the E-60/E-50 does not display all the sounds it contains when you switch it on for the first time. This "restricted" display mode is called "BEST SELECTION". In this mode, only the "new" sounds can be selected.

You may have grown fond of "older sounds" (from the G and VA series) and wish to select them. In that case, select "EXTENDED":

(1) Press the [MENU] button.
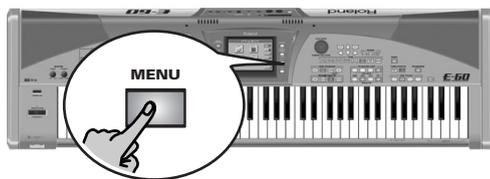
The display changes to:

(2) Press the [UTILITY] and the [STARTUP] field.

(3) Press either [BEST SELECTION] or [EXTENDED] to make your choice.
This setting is memorized and used until you change it again.

Drumming on the keyboard

The E-60/E-50 also allows you to play drums and percussion on the keyboard. If you have ever worked with an older Roland arranger instrument, you may remember that there used to be a part called "M.Drums" for playing percussion phrases. This part no longer exists, because any of the following Keyboard parts can be used for drumming: UP1, UP2, LWR and MBS.

(1) Press the TONE ASSIGN button of the part you want to assign a Drum Set to (the button lights).

(2) Press the TONE [DRUMS] button.
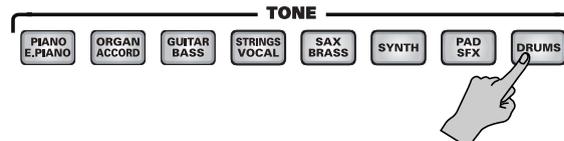
(3) Press a field to select another Drum Set.

You may have to use the [PAGE 1]~[PAGE 4] buttons to jump to the page that contains the desired Drum Set.

(4) Play a few notes on the keyboard.
Every key is assigned to a different drum/percussion sound. Press the second "C" key from the left (C2) to sound a bass drum ("Kick") and the white key to its right (D2) to play a snare sound. Then, try out the other keys.
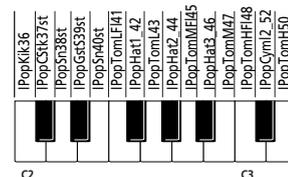
(this is only an example)

(5) Press the EXIT button to return to the main page.

Playing realistic guitar parts (Guitar mode)

Your E-60/E-50 provides a Guitar mode that allows you to play extremely realistic guitar parts via the keyboard. As you will see, this mode relies on a special approach, which is nevertheless very musical and surprisingly logical once you have come to grips with the underlying principle.

When you activate the Guitar mode, the UP1 part acts as main guitar, while the UP2 part is used as additional guitar that doubles the notes of the main guitar part. This means that, while the Guitar mode is active, UP1 and UP2 cannot be used for other melodic purposes. Though, with a little practice, you can also use it in realtime, the Guitar mode will prove invaluable for song and Style recording.

(1) Press the EASY SETTING GUITAR button.
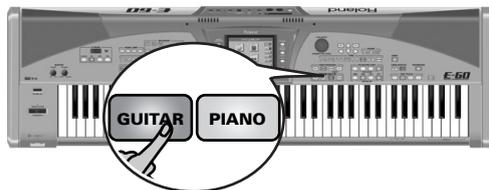
Note: You can also select this page by pressing MENU button → GUITAR MODE. In that case, you may need to switch the Guitar mode on using the Off/On switch icon (see below).

The indicators of these two buttons light and the display changes to:
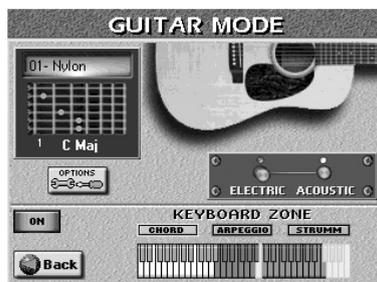
The Off/On switch icon allows you switch the Guitar mode on or off. If you selected this page by pressing EASY SETTING GUITAR, it is already set to on.

If you now return to the main page by pressing the EXIT button, the display changes:

The UPPER1 field below "GUITAR MODE" shows the name of the currently selected guitar sound. You cannot select other guitar sound for UPPER 1 simply by pressing this field: press the "GUITAR MODE" field to jump to the page shown above, then change the settings you don't like. (UPPER2's guitar sound is assigned automatically and can never be changed.)

First steps

(2) Press the ELECTRIC or ACOUSTIC switch icon to specify whether you need an electric or an acoustic guitar.
Your choice is reflected by the big guitar picture in the upper right part of the display.

(3) Play a chord in the keyboard area called "CHORD" in the display.

E-60: Play chords here

E-50: Play chords here

(You can release those keys right away if you like.)

Note: The keys in the "CHORD" area (unlike the ones of the "ARPEGGIO" and "STRUMM" areas, see below) also trigger other Keyboard parts you may have switched on. Depending on the Keyboard parts you switch on, those keys may play the MBS, LWR (left half). Even the Arranger's chord recognition remains active.

The notes you play in the "CHORD" area are not played by the E-60/E-50's Guitar section. They only specify what you will hear when you...

(4) Press the first "C" key to the right of the "CHORD" area.

Low E string
A string
D string
High E string
B string
G string
E-60

Low E string
A string
D string
High E string
B string
G string
E-50
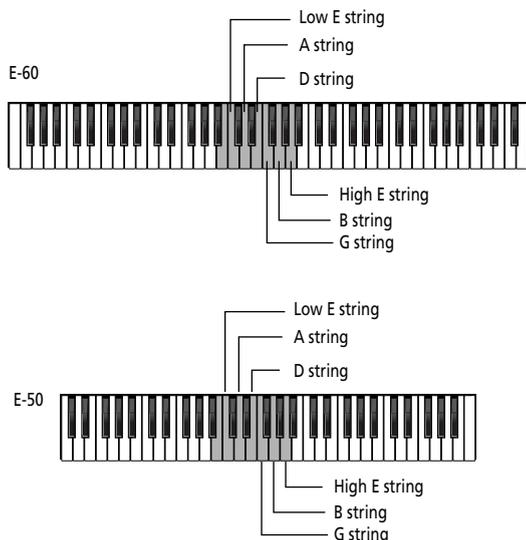
This sounds the note a guitarist would play on the low E string. The key you are pressing now belongs to the "ARPEGGIO" section.

(5) Now press the "D" to the right of the "C" you used above.

This sounds the note a guitarist would play on the A string.

(6) Continue with the "E", "F", "G" and "A" keys to sound the remaining guitar notes for the chord you specified.

Let us summarize all this: the six keys you have pressed so far are assigned to the virtual guitar strings. This allows you to play guitar arpeggios that use the chord information you supplied in the "CHORD" area. The exact phrasing of your arpeggios depends on the order in which you press the keys.

If you start pressing these "string" keys right after switching on the E-60/E-50 (and before specifying a chord), the Guitar mode sounds the basic pitches of the six strings (i.e. E-A-D-G-B-E). As soon as you play a chord in the "CHORD" area, however, the E-60/E-50 memorizes and uses it until you play a different chord.

(7) Play a different chord in the "CHORD" area and again use the "string" keys (in the "ARPEGGIO" area) to sound the constituent notes.

Additional ARPEGGIO functions

The keys indicated in the previous illustration correspond to the natural behavior of a guitar. But there are other things you can do in the "ARPEGGIO" area (most of these functions involve the black keys of the "ARPEGGIO" area):
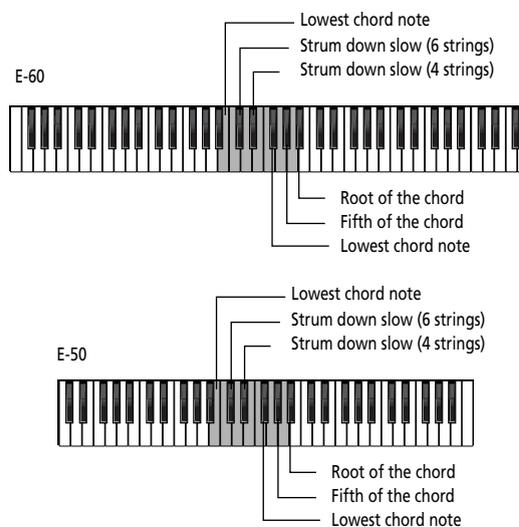
Lowest chord note
Strum down slow (6 strings)
Strum down slow (4 strings)
E-60
Root of the chord
Fifth of the chord
Lowest chord note

Lowest chord note
Strum down slow (6 strings)
Strum down slow (4 strings)
E-50
Root of the chord
Fifth of the chord
Lowest chord note

(1) Play a chord in the keyboard area called "CHORD" in the display.

(2) Press one of the following keys to use the "effect" assigned to it:

● **Lowest chord note (B3 & F♯4)**—These keys allow you to sound the lowest note of the chords you play in the "CHORD" area. Here's an example: if you play a "C" chord using the C-E-G keys, this function sounds a C. If you play that same chord using G-C-E, this function sounds a G.

● **Strum down slow (6 strings) (C♯4)**—This key causes all six strings to sound more or less at the same time. Later on, you will discover there is also a "fast" variety where all strings are hit almost simultaneously. "Down", by the way, means that the simulated plectrum (or thumb/finger) moves from the upper part of the guitar (the low E string) towards the floor.

● **Strum down slow (4 strings) (E♭4)**—This is similar to the above, except that only four notes are played.

● **Fifth of the chord (A♭4)**—This key plays the fifth of the last chord you specified (the G of a "C" chord, for example). Consider combining it with the next function for popular guitar licks based on the alternation between the root and the fifth. (You can also play them together, of course.)

● **Root of the chord (B♭4)**—Unlike the B3 or the F♯4, this key always sounds the root note of the last chord you specified, i.e. a C for a "C" chord, an E for an "E" chord, etc.

Leaving the E-60/E-50's Guitar mode

To leave the Guitar mode, press any EASY SETTING ([ARR], [ORGAN] or [PIANO]) button, or the [Off/On] switch icon on the GUITAR MODE page (to select "Off").

Alternatively, you can select a User Program that doesn't use the Guitar mode (see p. 89).

Selecting guitar sounds

Now that you know how to use some of the Guitar functions, let's try these techniques with different sounds. Additional playing techniques are discussed under "Using the available STRUMM techniques" on p. 31.

(1) Press the EASY SETTING GUITAR button.

Note: You can also select this page by pressing MENU button → GUITAR MODE. In that case, you may need to switch the Guitar mode on using the Off/On switch icon (see below).

The indicators of this button lights and the display changes to:

The Off/On switch icon allows you switch the Guitar mode on or off. If you selected this page by pressing EASY SETTING GUITAR, it is already set to on.

(2) Press the ELECTRIC or ACOUSTIC switch icon to specify whether you need an electric or an acoustic guitar.

This is an important choice to make, because it determines which guitar sounds can be selected (electric or acoustic ones).

(3) Select the desired sound (see the upper left corner) with the DATA/ENTRY dial or the DEC/INC buttons.

The possibilities are:

ELECTRIC	ACOUSTIC
01: Jazz Man	01: Nylon
02: OpenHard 1	02: Steel 2
03: Dist FX	03: Steel 3
04: OpenHard 2	04: Steel 4
05: Overd FX	05: Steel 5
06: Strat Clean	06: 12 guitars
07: CleanHalf	07: Nyl + Steel
08: Distorsion	08: Nyl + Steel 2
09: Warm Drv	
10: Power	
11: Dist Guitar	

About the chord indications

The GUITAR MODE page contains a "window" that shows you how the chords you play on the keyboard are transformed into guitar chords. The small numbers refer to the lowest fret being used. An "x" means that the string in question doesn't sound (guitarists sometimes use only four or three strings for their chords). And finally: the strings are shown from high E (top) to low E (bottom) – that's how guitar tablatures are usually printed. The guitar neck has therefore been turned upside down.

Using the available STRUMM techniques

While the "ARPEGGIO" area essentially provides functions that allow you to "compose" your own guitar parts in realtime, the "STRUMM" area contains a series of presets for various strumming techniques. "Strumming", as you may know, means that all guitar strings are played more or less simultaneously using a plectrum or one's fingers.

All functions discussed below use the chords you specify in the "CHORD" area (see above). Here are the keys that make up the "STRUMM" section:
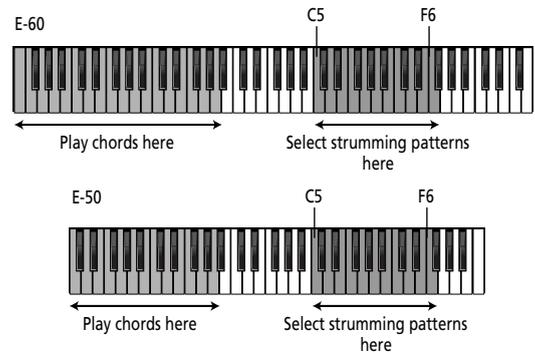
Note: As stated earlier, UP1 and UP2 are not available in Guitar mode, because they are used as guitar parts.

Note: The E-60/E-50's Arranger can also be used and controlled while Guitar mode is active, so that the chords you play with your left hand are used both by the E-60/E-50's Arranger and its Guitar mode functionality.

(1) Select the required guitar type (ELECTRIC or ACOUSTIC) and the desired sound.

See "Selecting guitar sounds".

(2) Play a chord in the keyboard area called "CHORD" in the display.

(3) Press one of the following keys to specify how your virtual guitar should be played.

The lowest "STRUMM" key is called "C5", the black key next to it "C♯5", etc.

Some of the keys mentioned below produce two effects: one when you press ("⇩") them, another when you release ("⇧") them. Entries without those symbols are "one-way" and therefore only trigger an effect when you press them.

● **Down fast (C5)**—This key causes all six strings to sound at the same time. This is the fast version of the strumming pattern mentioned earlier. (The slow version can also be played using the F♯5 key.)

● **⇩ Down fast/ ⇧ up fast (C♯5)**—Pressing this key triggers a fast downward strum. "Down" means that the simulated plectrum (or thumb/finger) moves from the lowest to the highest string (i.e. towards the lower part of the guitar). Releasing this key will trigger an upward strum (in the opposite direction).

● **Up fast (D5)**—This key causes all six strings to sound at the same time, this time from the highest to the lowest string.

● ⇩ Down fast mute/ ⇧ up fast (E♭5)—Here is another downward strum that is muted almost instantly when you press this key. Guitarists achieve this effect by putting their hand on all strings. When you release this key, your virtual guitar plays an upward strum, which is not muted.

● ⇩ Down fast/ ⇧ up fast mute (E5)—This is the opposite of the previous pattern: the upward strum is muted, while the downward is not.

● Down fast mute (F5)—This key triggers a downward strum that is muted almost instantly.

● Down slow (F♯5)—This key yields the same effect as the C♯4 (in the "ARPEGGIO" area).

● Down fast mute + knock (G5)—Here is a more elaborate technique, especially suited for acoustic guitars: a downward strum that is muted almost instantly and accompanied by a "knocking" sound.

● Up slow (A♭5)—This is a slow upward strum.

● Down slow mute (A5)—Here's a slightly slower downward strum that is muted.

● ⇩ Down fast 4/ ⇧ up fast mute 4 (B♭5)—Here again is a two-way technique. This one, however, only uses the highest 4 strings.

● Power chords 3 (B5)—This pattern is intended for electric guitar sounds, usually also with some distortion. Only the lowest 3 strings are "played".

● Down fast 4 (C6)—Here's another downward strum that only uses the highest 4 strings.

● ⇩ Down fast 4/ ⇧ up fast 4 (C♯6)—Again a combined strumming pattern. Here, too, only the highest 4 strings are used.

● Up fast 4 (D6)—An upward strum based on 4 strings.

● ⇩ Down fast mute 4/ ⇧ up fast 4 (E♭6)—Again 4 simulated strings that are strummed in two directions. The downward strum is muted.

● ⇩ Down fast 4/ ⇧ up fast mute 4 (E6)—This is the opposite of the previous pattern: here, the fast upward strum is muted.

● Down fast mute (F6)—And finally a "one-way" pattern that produces a fast downward strum, which is muted.

Playing question and answer phrases

It is also possible to temporarily "remove" the Guitar function from the keyboard and to play the UP2 in the entire right half (i.e. to temporarily deactivate the ARPEGGIO and STRUMM areas). After some practice, this should allow you to alternate between a guitar and another melodic instrument part.

(1) Use the PART ON/OFF buttons to switch on the part you want to play instead of the Guitar section.

(2) While the Guitar mode is active, switch off the PART ON/OFF UP1 button.
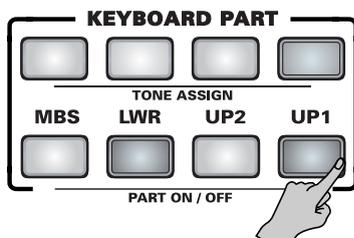
The EASY SETTING GUITAR indicator flashes to signal that the Guitar mode is being bypassed.

(3) Play on the keyboard.

(4) Switch on the PART ON/OFF UP1 button to restore the E–60/E–50's Guitar mode and play the next guitar bit.
To leave the Guitar mode, press any EASY SETTING (ARR, ORGAN or PIANO) or button, or the Off/On switch icon on the GUITAR MODE page (to select "Off").

Alternatively, you can select a User Program that doesn't use the Guitar mode (see p. 89).

Guitar Mode Options

There are additional functions you can set to fine-tune your virtual guitar's behavior. Using the DOUBLING section, you can even add a second guitar sound.

(1) On the "GUITAR MODE" page, press the OPTIONS field.
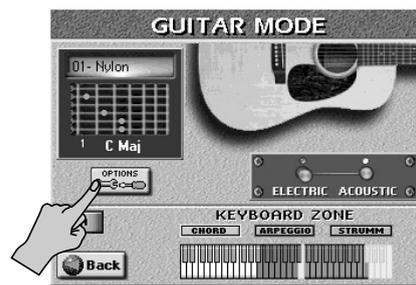
The display changes to:

(2) Press the switch icon of the parameter you want to switch on or off. Use the DATA/ENTRY dial (or DEC/INC buttons) to set the STEREO WIDTH parameter.
Here is what the parameters mean and do:

● RETRIGGER—This parameter allows you to specify whether the arpeggio notes of the key(s) you are pressing in the "ARPEGGIO" or "STRUMM" area are replayed again when you play another chord in the "CHORD" area. This function is on by default.

● CHORD OFF MUTING—Switch this function on when you want to mute the virtual guitar strings by releasing all keys in the "CHORD" area. That way, your left hand can be used for occasional "mute" instances whose effect is similar to the one obtained with any of the "mute" patterns in the "STRUMM" area.

● "V" NOISES—Guitar parts usually also contain gentle squeaking and sliding noises. Use this function to add such noises to your virtual guitar parts (or to switch them off if you don't like them).

● **ADAPT CHORD**—Switch this parameter on if your virtual guitar should adapt its chord voicings to the inversions you play in the "CHORD" area. As you know, each chord can be played in a variety of ways on a keyboard and a guitar. Though the Guitar mode always voices its chord in a typical guitar fashion (even when this parameter is off), you may need even more flexibility than this basic system can provide. In that case, switch on this parameter and try out different inversions to discover how that affects your guitar.

● **AUTO SUSTAIN**—When this function is on (default setting), all guitar notes you trigger using the "ARPEGGIO" keys have a longer decay. If you switch it off, the notes are a lot shorter.

● **HOLD PEDAL**—This function only works if you connect an optional DP-2, DP-6, or BOSS FS-5U footswitch to the HOLD FOOTSWITCH socket. The pedal's behavior depends on whether AUTO SUSTAIN is on or off.
When AUTO SUSTAIN is on, while HOLD PEDAL is also on, pressing the Hold pedal temporarily bypasses the AUTO SUSTAIN setting, and thus causes the guitar notes to have a short decay.
If AUTO SUSTAIN is off, while HOLD PEDAL is on, pressing the Hold pedal temporarily produces a normal Hold/damper effect.
Note: This Hold function is added to the one that allows you to hold notes played by the active Keyboard parts (MBS, LWR), if they have been assigned to that footswitch (see p. 54).

● **DOUBLING**—This section allows you to add a second guitar to the main guitar part. That added guitar uses the same sound as your main guitar. The purpose of this added guitar is to create the impression that the guitar part is played by two musicians.

● **STEREO WIDTH**—(0~50) This parameter allows you to specify the distance between the two guitars in the stereo sound field. The higher the value, the further they are panned to the left and right sides respectively.

● **STRUMM UP**—These button fields are mutually exclusive and only apply to the two D notes of the STRUMMING section. "NOTE ON" means that the strum is played when you press one of the two D keys. "NOTE OFF" means that the strum sounds when you release one of the D keys. This selection does not apply to the remaining STRUMMING keys.

(3) Press the Back field to return to the "GUITAR MODE" page, or the EXIT button to return to the main page.
Note: All GUITAR MODE settings can be written to a User Program and recalled at a later stage. See p. 88.

Working with the Music Assistant

The E-60/E-50's Music Assistant is also related to the Arranger/Style section. It is a collection of registrations for given songs that select the most appropriate Music Style and sounds for the Keyboard parts (along with a whole bunch of other settings).

The E-60/E-50 ships with more than 300 pre-programmed Music Assistant registrations and also allows you to program new ones.

(1) Press the MUSIC ASSISTANT button.

The display now looks as follows:

(2) If the name of the registration you want to use is already displayed, press its field.
The E-60/E-50 now recalls the settings for this registration.

(3) Press the START/STOP button to start playback of the automatically selected Style.

If the desired registration is not displayed…
● Press the ◀▶ fields in the display or rotate the DATA/ENTRY dial to scroll through the list.
Pressing the DATA/ENTRY dial will select the registration in the top line. (This only works if no registration has been selected yet.) If you select a registration and then change any of its settings (like selecting another sound, for example), pressing the DATA/ENTRY dial recalls the original Music Assistant settings.
You can also use the DATA ENTRY ▲▼ buttons to select a registration among the ones that are currently visible in the display (the buttons don't allow you to change pages).

To save time…
There are other ways of locating the registration you are after. As you see, there are three button icons: NAME, ARTIST and GENRE.
● Press the GENRE field to sort the Music Assistant entries alphabetically by musical genre. This reshuffles the list.

• Press the [ARTIST] field to sort the Music Assistant entries alphabetically by artist name. This reshuffles the list.
The genre names (right column) disappear and are replaced by the artists' names, which are displayed in alphabetical order.

• Press the field of the registration you want to use.

• Press the [START/STOP] button to start playback of the automatically selected Music Style.

Using the Finder

Yet another way of locating the desired registration goes like this:

(1) On the "Music Assistant" page, press the [FINDER] field.

(2) Press [NAME] (registration name), [ARTIST] (artist name) or [GENRE] (musical genre) to specify which entry you want to look for.

(3) Enter only as many characters as you think are necessary to find the registration you are after.
The character string you enter can be used in two ways (see below).

• Use the [←] and [→] fields to select the position for which you wish to enter a new character.

• Use the alphanumeric keypad to enter the desired characters. This keypad works exactly like the keypad of a cellphone: you may have to press an alphanumeric field several times to select the desired character or number.
Note: The Finder makes no distinction between upper- and lower-case letters.

• The [Delete] field allows you to delete the selected character. Press and hold it to clear all characters.

• Press [Space] to insert a blank (or the number "0").

• If you forgot to insert a character, use [←] or [→] to select the position where the missing character should be inserted. Then press [Insert], followed by the character you wish to insert.

• If you only want to enter numbers, activate the [NUM LOCK] field.

(4) Decide how the Finder should look for the files:

• Press the [Alphabetic Order] field to search for all entries that start with the characters you entered ("BEA", for example). Names that match the specified criteria will be displayed at the top of the list.

• Press the [Search Only] field to have the E-60/E-50 search for names that contain the supplied information. (This would allow you to also locate a file called "Raggabeat" if you entered "BEA".)

(5) Press the [FIND] field to start your search.
The display returns to the "Music Assistant" window and displays the entries that correspond to your search criteria.

Note: If no Music Assistant registrations were found, the following message appears and no entries are displayed (in which case you need to press the [ARTIST] or [GENRE] field to display all entries again):

(6) Press the field of the Music Assistant registration you need and start playing.
Note: To return to the previous page without searching for registrations, press the [Back] field.
Note: To once again display all file names after a search (which causes only matching entries to be displayed), press one of the alphabetical sort icons ([NAME], [ARTIST], [GENRE]) on the "Music Assistant" page.
Note: See "Music Assistant Mark" on p. 96 and "Music Assistant functions" on p. 99 for how to create or edit Music Assistant data.

Playing back songs (Standard MIDI Files)

Your E-60/E-50 contains all kinds of functions for "customizing" the songs you play back via easy-to-use routines. Let us first look at the playback functions proper.

(1) Press the FINDER SONG button.
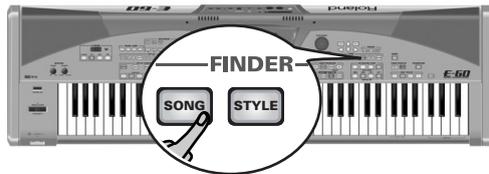
You can also press the SONG field on the main page to select songs.

The display changes to:

(2) If it isn't already highlighted, press the INTERNAL MEMORY field in the upper right corner.

The E-60/E-50 is shipped with a few example songs that can be used here. This function is also available for songs you record or save to the internal memory (or a memory card).

The display shows a list of 5 songs (Standard MIDI Files) in the internal memory. If you prefer to listen to one of your own songs on floppy disk, insert it into the drive and press the FLOPPY field.

To listen to a song on memory card, insert the card and select EXTERNAL MEMORY, then continue with step (3).

(3) If the name of the song you want to listen to is already displayed, press its line.

(4) To display the next 5 songs, press the ➡ field in the lower right corner.

You can press this field as many times as necessary (or until it is no longer displayed). You can also use the DATA/ENTRY dial or the DEC/INC buttons.

To return to a previous group of 5 songs, press ⬅ (or use the DATA/ENTRY dial or the DEC/INC buttons).

Quick location of the song you need

There are several ways of quickly locating the song you are after:

■ Sorting files

Press the SONG NAME, ARTIST, GENRE or FILE NAME field to sort the song files according to artist names, kind of music (Genre) or file name (which is usually rather incomprehensible). The right column now contains the selected entry (only one of them can be displayed along with the song name).

Continue with step (3) to select the song you want to listen to.

■ Using the Index function

After performing step (2), press the INDEX field in the upper left corner.

The display changes to:

(5) Press one of the displayed field names to narrow down your search to songs that belong to the selected category ("Index").

The display now returns to the page shown under step (1) above. This time, however, only the songs belonging to the selected Index are displayed.

(6) Continue with step (3) to select the song you want to listen to.

Note: Press the ALL field to display all songs in the selected memory.

■ Using Play & Search

If you only know the melody of the desired song, press the FINDER field under step (1).

• Press the [PLAY&SEARCH] field.

SONG FINDER

[A ALPHABETIC ORDER] [SEARCH ONLY] [PLAY & SEARCH]

Play the melody on the keyboard

[◄ RESET] [DELETE LAST NOTE]

[Back] [FIND]

• As indicated in the display, play the main theme on the keyboard. You can play in any key and the rhythm doesn't have to be perfect either (this function just looks for intervals).

• If you played a wrong note, press [DELETE LAST NOTE].

• To enter the entire line again, press [◄ RESET] to erase the previously entered notes, then play the phrase again.

• After entering the melody, press the [FIND] field. The display now returns to step (1) on page 35 and shows the names of the songs that contain the melody you played.

• Press the field of the song you want to play back.
Note: If no songs were found, the following message appears and no file names are displayed (in which case you need to press the [SONG NAME], [ARTIST], [GENRE] or [FILE NAME] field to display all songs again):

SONG LIST

[INDEX] ALL [EXTERNAL MEMORY] [FLOPPY] [INTERNAL MEMORY]

[A Z] [FILE NAME]

No Match Found

[OPTIONS] [FINDER] FOUND 0 GLOBAL 47 [◄] PAGE 1 [►]

If the E-60/E-50 did find one or several matches, the "FOUND" number will be smaller than the "GLOBAL" number.

Starting playback

(7) To return to the main page, press [EXIT].

CHORD | MEASURE 1.1 | TEMPO ♩= 98 4/4
C Maj | SPLIT | MAIN C 4 | [SONG] [STYLE]
SONG New Song | SCALE TUNE Off
STYLE Strummlin' Pop | TRANSPOSE 0
USER PROGR. Free Panel
PARTS [↓] OCTAVE 0 [↑] [SPLIT] [WHOLE]
LOWER St.Slow Str1 | NaturalPiano | UPPER1
MBASS XV Ac.Bass | Vintage EP1 | UPPER2

The "main page" is the E-60/E-50's display page that provides a maximum of relevant information and allows you to select (and change) items you may need during normal operation.

It also displays the name of the selected song, the tempo and the current measure. You can press the [SONG] button icon in the upper right-hand corner to see the song's tempo. (This value is automatically displayed when you start song playback.)
Note: If the message "Too many events" is displayed, the selected song contains more data than can be handled and is therefore not played back.

(8) Press the [PLAY/STOP ►/■] button.

[PLAY STOP ►/■]

Playback of the selected song starts.
Note: See "Song/Arranger Start Priority" on p. 196 if playback does not start.

(9) If necessary, use [◄ SLOW] and [FAST ►] to change the tempo.
You can also press the [TAP] button several times in the rhythm of the desired tempo.

To quickly return to the default tempo, simultaneously press [◄ SLOW] and [FAST ►].

(10) Use the MASTER [VOLUME] knob to set the E-60/E-50's output volume.

MAS VOLUME
MIN MAX

You can also play to the music using the Keyboard parts. If necessary, use the [BALANCE] knob to set the desired balance.

Other practical playback functions
■ MARK JUMP

The factory-loaded songs in the E-60/E-50's internal memory contain four locations ("markers") you can jump to right away. For songs that do not yet contain them, you can program these markers yourself. You can also edit the locations of existing markers (page 109).

• Use the MARK JUMP [1]~[4] buttons to select the position you want to jump to without stopping or delaying playback (the indicator of the button you pressed flashes). Such changes occur at the end of the current measure (the indicator stops flashing and lights), which makes more musical sense than jumping when you're halfway into a measure.

MARK JUMP
[1] [2] [3] [4]

There are four MARK memories. For the factory-loaded songs, they correspond to:
1= verse, 2= chorus, 3= bridge, 4= ending

The advantage of these markers is that you can return to the chorus, for example, if you notice that the audience wants the song to last a little longer than originally planned. Markers also allow you to change the song structure in realtime (by starting with the bridge, for example).

Note: If you press a MARK JUMP button almost immediately after starting song playback, the Recorder may suddenly stop and the message "Song Scanning" may appear. This can be solved by reducing the playback tempo so that the E-60/E-50 has enough time to process all MIDI data contained in the song.

■Reset, rewind, fast-forward

You can also use the following buttons to jump to different song locations.

|◄ TOP: allows you to return to the beginning of the current song.
◄◄ BWD: allows you to rewind one measure at a time. You can also press and hold this button to rewind more rapidly.
►► FWD: allows you to fast-forward one measure at a time. You can also press and hold this button to advance more rapidly.

These buttons are available both during playback and while playback is stopped.

■Next Song

While the current song is still running, you can already select the next one to be played back. If you want it to start automatically, proceed as follows:

• Press the NEXT SONG button.

• Select the desired song using the Song Finder (page 35).
• As soon as the current song finishes, the next one starts automatically. There is thus no need to press PLAY/STOP ►/■ again. You could now already select another song.
• Press the NEXT SONG button again to switch off this function.

Note: Your E-60/E-50 also provides a PLAY LIST function for programming sequences of several songs (page 115).

■Player (Data Update and Quick Start)

(1) Press the MENU button.

The display changes to:
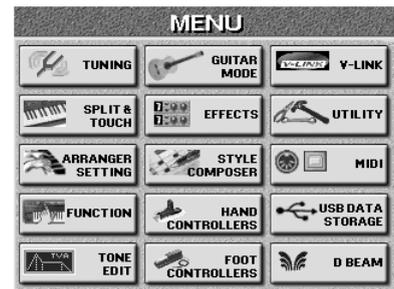
(2) Press the UTILITY, then the GLOBAL field.
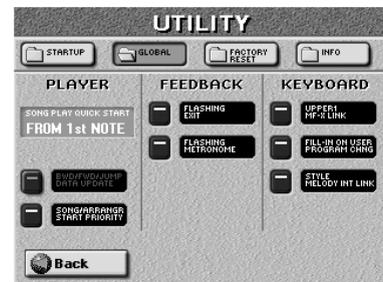
(3) Use the button icon next to the BWD/FWD/JUMP field to specify whether (on) or not (off) SysEx messages contained in the song you play back are updated while you fast-forward/rewind or use the MARK JUMP buttons.

(4) Press the SONG PLAY QUICK START field and use the DATA/ENTRY dial to specify where and how song playback should begin:

● FROM SECOND BAR—This function causes playback to start from measure 2 of the selected Standard MIDI File. This is often useful, because the first bar of most Standard MIDI Files contain SysEx and control change data that "configure" the E-60/E-50's sound source. Playing back that measure on stage may lead to a rather long blank, which you probably want to avoid.

● FROM FIRST NOTE—This is basically the same as the above, except that playback is started on the first note of the selected song.

● OFF—Playback starts at the very beginning of the song file (and may thus contain a few silent bars).

● SONG/ARRANGER START PRIORITY—Allows you to specify whether starting a song can (or cannot) interrupt Arranger playback, and vice versa. See page 196 for details.

Using the Song Cover function

The COVER function provides "masks" that change the instrumentation of the selected song (or Music Style). Simply by selecting another preset, you can cause a Viennese waltz to be played back by a heavy metal band, etc. Even though the arrangement (rhythm, riffs) does not change, the songs' character can be modified beyond recognition.

(1) Press the COVER button once or twice to select the display page shown below.

(2) Select the parts whose instrumentation you want to change:

Press the ALL field if all instruments should be replaced.

Press the DRUM field if only the drum and percussion instruments should change.

Press the BASS field if you're happy with everything but the bass line's sound.

(3) Press one of the six fields in the lower half of the display to select another preset.
After selecting a preset, you can press ORIGINAL (page 1) to return to the original orchestration.

(4) If none of the displayed presets appeal to you, use the PAGE ◄► fields at the right to jump to another page with more presets.

(5) Try out various presets to see how (fast) this concept works.

(6) If you like the new version better than the original one, you can press the SAVE field to save the song to the internal memory, a memory card or floppy disk with this information (page 108).
Note: The COVER information is part of the data only the E-60/E-50, E-80 or G-70 understands. You can still play back the newly saved version of this song on another sequencer or SMF player, but the COVER information will be ignored.
Note: You can also modify the COVER settings yourself (see p. 103).

Minus One

"Minus One" means that (at least) one part of a song is not played back. There are at least two applications for this function:

- it allows you to play the muted parts yourself on the keyboard;
- it allows you to sing without doubling by the song (which may sound odd).

(1) Press the MINUS ONE button.

The button's indicator lights and the melody part (track 4) is muted. If you want to mute other parts (or use another preset), proceed as follows:

(2) Press and hold the MINUS ONE button.
The display changes to:
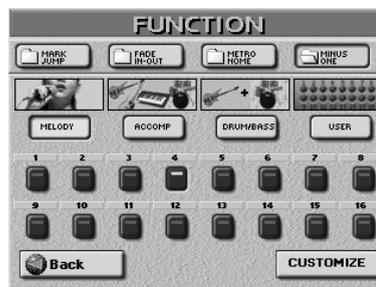
(3) Press one of the three "preset" fields to mute the corresponding song parts:
Press MELODY to mute the melody (you will notice that the 4 field also lights).

Press the ACCOMP field to mute everything except the bass and drums.

Press the DRUM&BASS field to mute the bass and drum parts (2 and 10).

Note: Even the "preset" fields can be used simultaneously. And the part fields 1~16 can be added, too.

(4) To mute other parts "ad lib" (i.e. without taking advantage of the presets):

- Press the USER field. This mutes only 4 (the melody).

- Switch off all parts you don't want to hear by pressing the 1~3 and 5~16 fields. Indicator icons of parts you need must light (the others must be dark). By pressing one of these fields, you switch off the active preset.

- To save this customized "Minus" setting in the E-60/E-50's internal memory, press CUSTOMIZE.
The USER field lights to indicate that your settings are now being used.

(5) Press the EXIT button to return to the main page.
Your last preset selection (MELODY~USER) will be used until you select another preset or until you switch off your E-60/E-50.

(6) Press $\boxed{\text{MINUS ONE}}$ again to switch off this func-
     tion.
     Note: You can also switch the Minus One function on/off
     using the D Beam controller (E-60, p. 54) or an optional foot-
     switch (page 56).

Displaying Lyrics and chord information
→ *Only available for Standard MIDI File playback*
Your E-60/E-50 also allows you to view the lyrics (if
available) –and even the notes– of the songs in the dis-
play.

The Lyrics function was provided to allow you to read
the words of the songs you play back in a karaoke fash-
ion: the words to sing are highlighted at the right time.
Note that this function is only available for Standard
MIDI Files that contain Lyrics data. Ask your dealer for
details.

Apart from the Lyrics, the E-60/E-50 also displays the
chords, which may come in handy for a guitarist or
bassist with whom you are playing.

The chord information is usually not contained in a
song as such, but that's no problem: the E-60/E-50 can
"calculate" it in realtime and even display it a little
ahead of the "changes". This also applies to the notes
proper that can be displayed in realtime.

(1) Select a song (page 35).
(2) Press the $\boxed{\text{LYRICS\&SCORE}}$ button.

The display changes to:

(3) Start song playback.
     The chord information appears at the bottom of the
     screen.
     Note: The chord information is calculated in real-time and
     may not always be accurate. Also, with chords where the third
     has been omitted, no information will be displayed (because it
     is impossible to tell whether those are minor or major chords).
     Note: You can also add Lyrics data to songs that do not yet
     contain them. See page 120 for details.

(4) Press the $\boxed{\text{ZOOM +}}$ button if the lyrics are difficult
     to read.
     Press $\boxed{\text{ZOOM –}}$ to select the normal size again.

■Changing background color of the lyrics window
Apart from enlarging the lyrics (see above), the E-60/
E-50 also allows you to set the background color if
you don't feel comfortable with the black-on-white
system that is used by default.

(1) Press the $\boxed{\text{OPTIONS}}$ field on the page shown above.

(2) Press the COLOR PRESET $\boxed{1}$ (dark characters on
     white background), $\boxed{2}$ field (white text on dark
     background), or $\boxed{3}$ (dark characters on gray back-
     ground).
(3) Press the $\boxed{\text{Back}}$ field to return to the LYRICS page.

Displaying scores
→ *Only available for Standard MIDI File playback and
only in the E-60/E-50's display.*
If you don't remember the notes of the song you are
about to play, you can ask the E-60/E-50 to display
them on-screen:

(1) Select a song (page 35).
(2) Press the $\boxed{\text{LYRICS\&SCORE}}$ button.

(3) Press the $\boxed{\text{SCORE}}$ field if it doesn't "light".
     The display changes to:

(4) Start song playback and watch the display.
(5) Press the $\boxed{\text{ZOOM +}}$ button if the notes are difficult
     to read.
     Press $\boxed{\text{ZOOM –}}$ to select the normal size again.
     Now maybe the way in which the notes are displayed
     is not quite right. In that case...

(6) Press the OPTIONS button.

There are several things you can decide here:

- Do you want see the notes of one song part or of two? If you only need one, activate 1 STAFF. To see two parts, activate 2 STAVES. In the latter case, the display changes to:

- Select the track(s) whose notes should be displayed: Press the (corresponding) TRACK field and use the DATA/ENTRY dial to select the track.
"STAFF 1" is the upper staff, "STAFF 2" the lower one.

- If you happen to know the key your song is in, press the KEY field and use the DATA/ENTRY dial to select the correct setting.
This is only necessary to avoid that the score is cluttered up with accidentals (sharps and flats).

- Use the 🎼 and 𝄢 fields to specify what clef should be used for displaying the notes. Press whichever is more convenient for you (this setting has no effect on the octave the notes are actually played in – it is only used for display purposes).

- Use the button icons in the PITCH row to specify how the note names should be displayed next to the note symbols:
OFF means that the note names are not displayed; A,B,C refers to the Anglo-Saxon/German/Dutch system; while DO,RE,MI corresponds to the French/Italian system.

- Use the button icons in the DRUM RANGE row to specify which notes of the drum track (usually track 10) should be displayed. FILTER means that you will only see the notes between note numbers 35 and 59. FULL, on the other hand, means that you will see all drum notes.
This setting is only used if you set (one of) the TRACK field(s) to "10" or number of a track that plays a drum part. Most drum parts only trigger MIDI notes between numbers 35 and 59.

(7) Press Back to see the notes again.
If necessary, you can return to the OPTIONS page to correct settings you don't like after all.

Recording your music

You can record your music as "Songs" that can be saved internally, to a memory card or a floppy disk.

There are two approaches for recording:

① **Recording everything at once**
This is the easy approach: you press the REC ● button, you set the E-60/E-50 the way you want it to sound (with or without Arranger, for example), and you start playing.

② **Recording each track separately**
This approach means that you first record a drum part (for example), then a bass line, followed by a piano part, etc. For this approach, you need to select the 16-track Sequencer mode (see p. 123).

It is also possible to combine these two approaches by first recording most of the parts using approach (①) and then adding other (or replacing existing) parts using approach (②).

Let us begin with the easier approach:

Recording with Style backing

In this example, you will learn how to record your solo playing and the Arranger's accompaniment.

(1) Press the REC ● button (it flashes).
Note: Whenever you press the REC ● button and start recording (see below), the song RAM memory is erased. Be sure to save the current song data before recording a new song (see p. 44).

(2) Press the EASY SETTING ARR button.
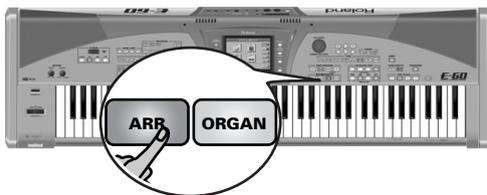
(3) Select a Music Style (see p. 25) and a sound for your right hand (see p. 27).
You can also press a ONE TOUCH button and select a Style. In that case, there is no need to select a sound for your right hand in step (3), because that is done automatically. See also p. 27.

Switch on additional Keyboard parts by pressing their PART ON/OFF buttons, if you want to double your melody using one or several instruments.

Note: Rather than performing the above steps, you could recall a User Program with the desired settings (page 89).

(4) If you want to start your song with an introduction, press the INTRO button and a VARIATION button 1~4.

(5) Press the START/STOP button to start recording.
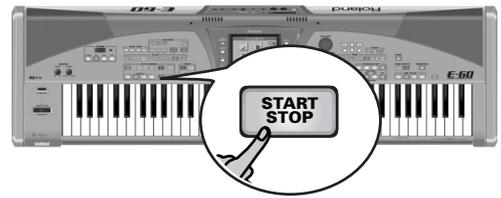
The Recorder now counts in one measure, after which Arranger playback and recording start.
Note: See page 59 for setting the Count-In function.

(6) Play the Arranger chords with your left hand and the melody with your right.
Note: You can also use the E-60/E-50's performance functions for your melody playing. See page 48 for details.

(7) To stop recording, do one of the following:
• Press the END/RIT and a VARIATION 1~4 button. The Arranger will play an ending phrase. When it is finished, Arranger playback and recording stop.
• Press the START/STOP button. This will stop Arranger playback and recording.
• Press the PLAY/STOP ►/■ button. This will stop Arranger playback and recording.

Listening to your song

You probably want to listen to your song now. If you like it, be sure to save it (see "Saving your song" on p. 44).

(8) Press the RECORDER TOP I◄ button.
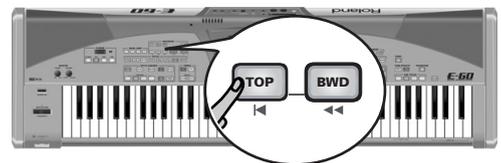
This causes the Recorder to return to the beginning of your new song.

(9) Press the PLAY/STOP ►/■ button to start playback.
Note: See "Song/Arranger Start Priority" on p. 196 if playback does not start.

(10) Press PLAY/STOP ►/■ again to stop playback and TOP I◄ to return to beginning of the song.

Recording without accompaniment

Let us now look at how to start recording without automatic accompaniment. You can nevertheless start the Arranger at a later stage (after your ad lib introduction, for example): it will play in sync with the song tempo.

(1) Press the ⟨REC ●⟩ button (its indicator flashes).
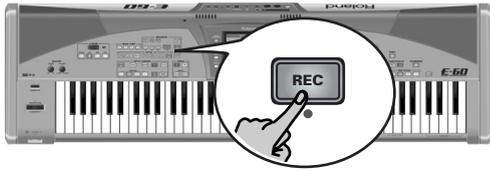
Note: Whenever you press the ⟨REC ●⟩ button and start recording (see below), the song RAM memory is erased. Be sure to save the current song data before recording a new song (see p. 44).

(2) Press the EASY SETTING ⟨PIANO⟩ button.

To record a guitar part, activate the E-60/E-50's Guitar mode by pressing the EASY SETTING ⟨GUITAR⟩ button.

(3) Use the ⟨◄SLOW⟩⟨FAST►⟩ buttons, the ⟨TAP⟩ button or (if the main page is displayed), the ⟨DATA/ENTRY⟩ dial to set the desired tempo.

(4) If you want to start Style playback at a later stage, select a Style (see p. 25). Also select a sound for your solo playing (see p. 27).
Note: Rather than performing the above steps, you could recall a User Program with the desired settings (page 89).

(5) Press the ⟨PLAY/STOP ►/■⟩ button to start recording.

The Recorder now counts in one measure, after which recording starts.

Note: See page 59 for setting the Count-In function.

(6) Start playing.

(7) To start Arranger playback, press the ⟨START/STOP⟩ button.

(8) If you want to stop Style playback before the end of the song, press either the ⟨END/RIT⟩ or the ⟨START/STOP⟩ button.
This will stop the Arranger, while recording goes on. This allows you to improvise without accompaniment.

(9) Press the ⟨PLAY/STOP ►/■⟩ button to stop recording.

(10) See "Listening to your song".

Adding more parts

Here is how to redo part of your recording (one part you do not like) or to add additional parts to what has already been recorded.

Let us first have a look at what has been recorded so far – and where:

We started out with the Arranger, which means that the following tracks may now contain data (not all Styles use all 8 tracks the Arranger can play back simultaneously):

Arranger part	Recorder track
ADR	10
ABS	2
ACC1	1
ACC2	3
ACC3	5
ACC4	7
ACC5	8
ACC6	9

If you also recorded one or several Keyboard parts, their data reside on the following tracks:

Keyboard part	Recorder track
UP1	4
UP2	6
LWR	11
MBS	12
MELODY INT	15

UP1/2 and LWR can also be used as additional drum part if you assign them a Drum Set (TONE ⟨DRUMS⟩ button).

For the following, we will assume that you recorded the melody using the UP1 part (track 4) and that you now want to add some chords using the LWR part.

(1) Start by taking note of the track you wish to (re)record.
See the tables above. For our example, we will use track 11 (LWR).

(2) Press the RECORDER ⟨16-TRK SEQ.⟩ button.

You have just selected the more detailed recording function (the "sequencer"). The display changes to:
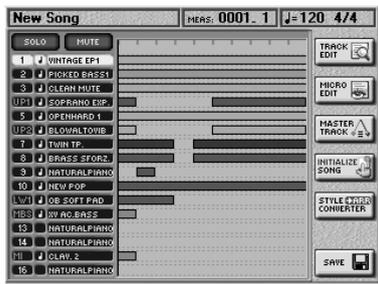
The bars in the right part of the display indicate the tracks that already contain data.

(3) Press the RECORDER [REC ●] button.

The display changes to:
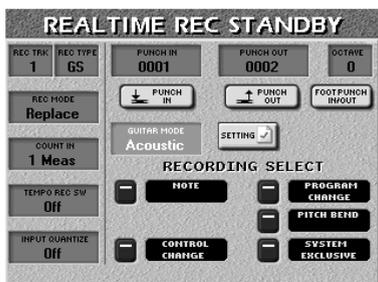
(4) Press the [REC TRK] field and use the [DATA/ENTRY] dial or the [DEC]/[INC] buttons to select the track you want to record to.
For our example, select "11".

If necessary, press the [REC TYPE] field and use the [DATA/ENTRY] dial or the [DEC]/[INC] buttons to select "LWR".

(5) Assign the desired sound to the track selected for recording.
See "Selecting sounds for the Keyboard parts" on p. 27. You can play on the keyboard to check whether the sound matches the mood of the part you wish to record.

(6) Specify what should be recorded by activating the corresponding RECORDING SELECT button icons.

(7) For this example, switch on NOTE, CONTROL CHANGE, PROGRAM CHANGE and PITCH BEND. See page 126 for an explanation.

(8) Press the RECORDER [TOP I◄] button.
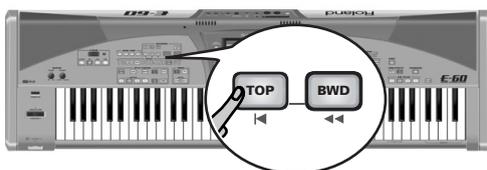
The sequencer returns to the beginning of the song (measure "1").

(9) Press the [PLAY/STOP ►/■] button.
The sequencer now counts in one measure, after which recording starts.
Note: See page 59 for setting the Count-In function.

(10) Play the new part.

(11) Press the RECORDER [PLAY/STOP ►/■] button to stop recording.

The display changes to:
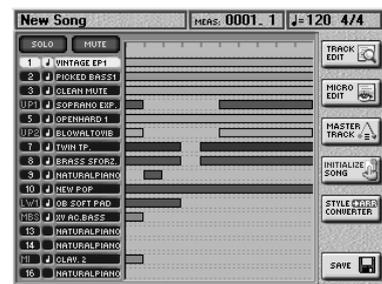
The track that contains your new part is highlighted (left column) for easy identification. That row also contains a horizontal bar to signal that the track now contains data.

(12) Listen to your song (page 41).
If you like it, save it, if you're not happy with your part, go back to "Adding more parts" on p. 42.

In step (3), however, press the [REC MODE] field and use the [DATA/ENTRY] dial or the [DEC]/[INC] buttons to select "Replace".

Note: See p. 129 if you want to change just single notes or other aspects of your song (which is called "editing").

Saving your song

A song you save to becomes a Standard MIDI File that can be played back with the E-60/E-50, but also with any other SMF-compatible sequencer.

There are two ways of saving new or edited songs:

- Via the DISK & MEDIA button and the related menu (see p. 176).
- By pressing the SAVE field on the 16-track Sequencer page.
  Note: Whenever you leave the 16-track Sequencer page by pressing the EXIT button, the display shows a "Song has been changed…" message that asks you whether you want to save your changes. Press the YES field and proceed.

Here, we will show you how to save your song using the SAVE field.

(1) On the 16-track Sequencer page, press the SAVE field.
The display now responds with:

(2) Specify where you want to save your song:
- Press the INTERNAL MEMORY field to select the E-60/E-50's internal memory as target (this is a 16MB storage area similar to a hard disk).
- Insert a floppy disk into the drive and press the FLOPPY field.
- Press the EXTERNAL MEMORY field. This option is only available if you insert a memory card into the E-60/E-50's PCMCIA slot.
  If your floppy disk or memory card does not seem to work, try formatting it, then try again. See "Format" on p. 181.
  Note: If you want to save the song under its current name or the name assigned by default ("New Song"), you can skip steps (4)~(5).

You need to give your song two names: a SONG NAME and a FILE NAME. The FILE NAME is the name the E-60/E-50 uses for locating the song. The SONG NAME, on the other hand, is displayed in the Song Finder.

(3) Press the SONG NAME button icon.

(4) Enter the name:

Entering names

- Move the cursor to the desired position using ← and →.
- Enter the character for that position using the alpha-numeric keypad. In many instances, you will have to press a field several times to select the desired character.
- Use the A/a field to alternate between capitals and small letters.
- Press the Delete field to delete the character indicated by the cursor. Press and hold it to clear all characters.
- Press Space to insert a space.
- Press Insert to insert a character at the current position. All characters behind this position move one position further to the right.

(5) Press the FILE NAME field and enter the file name. Here, you can only enter 18 characters. All characters will be capitals.

(6) Press the EXECUTE field to save your song.
The display tells you that the data are being saved, after which it returns to the "SAVE SONG" page.

(7) Press the EXIT button to return to the main page or the RECORDER 16-TRK SEQ. button to add even more tracks.

4. About the Keyboard modes

The KBD MODE setting is the singlemost important parameter of your E-60/E-50 because it determines which parts (or Tones) and sections are available. Though the EASY SETTING buttons set these parameters automatically, you should familiarize yourself with the KBD MODE concept.

Arranger, Piano, Organ and Guitar modes

The E-60/E-50 has four major keyboard modes: ARRANGER, PIANO, ORGAN and GUITAR. They can be selected using the EASY SETTING ARR, ORGAN, GUITAR and PIANO buttons. The second mode, ORGAN, configures the E-60/E-50 for organ music. The Guitar mode transforms the E-60/E-50 into a virtual guitar (see p. 29).

In many instances, pressing ARR, GUITAR, PIANO or ORGAN provides a nice starting point for further fine-tuning. Select ARR (or ORG) when you need the automatic accompaniment function and wish to activate its chord recognition in the left half (see page 67 for details). Select PIANO to activate PIANO CHORD recognition.

Note: Pressing one of these buttons not only selects the desired Keyboard Mode but also sets a series of other parameters. In some cases, the parts you may have been using up to that point are suddenly muted. Another important aspect is that the split point (see below) will be set to "C4" when you press ARR or ORGAN.

In **ARR** mode, the keyboard is split into two halves. The *left* half is used for playing chords that the Arranger uses for transposing the Music Style patterns in realtime. The *right* half, on the other hand, can be used for adding a live melody to the Arranger's automatic accompaniment. This melody can be played using the Upper1 (UP1) part. Feel free to add other parts for creating richer sounds. See p. 47.
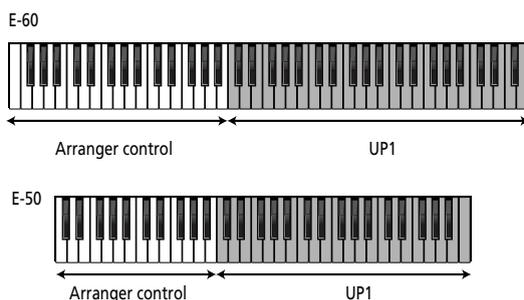
- The keyboard is divided into two halves, with the split point at the C4.
- Only the UP1 part is active in the right half of the keyboard (see page 26 for an explanation of this concept).

- ZONE= *LEFT* (page 67).
- *INTELLIGENT* chord recognition (TYPE, page 66). One button (here ARR) therefore allows you to prepare the main parameters for working with the automatic accompaniment (called "Arranger").

Except for the addition of the LWR part, the EASY SETTING ORGAN button has the same effect.

In **PIANO** mode, the Upper1 part (UP1) is assigned to the entire keyboard.
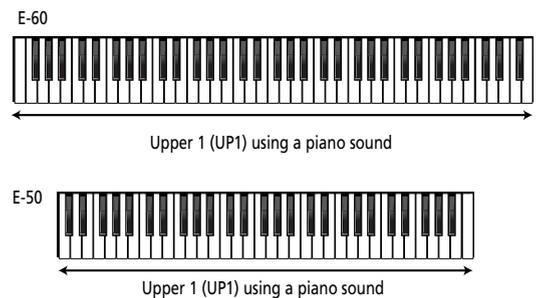
Later on, you will discover that you do not need to work with a piano sound in this mode.

The settings affected by the EASY SETTING PIANO button are:

- Whole mode with only UP1 active.
- The "NaturalPiano" Tone is assigned to UP1.
- Arranger ZONE= *WHOLE* (page 67). Press the START/STOP button to start and stop the Arranger. See page 25 for how to select internal Music Styles.
- Arranger TYPE= *PIANO STYLE* (page 67).

In **ORGAN** mode, the keyboard is again split into two halves (LW and UP1). This time, however, there is no automatic accompaniment. As its name implies, Organ mode is primarily intended for playing organ music, which is why selecting this mode calls up three organ sounds.
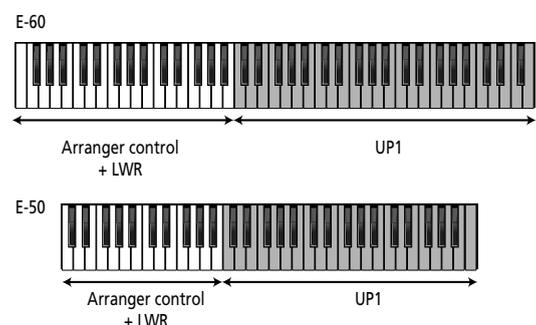
The left half of the keyboard allows you to use one part for chords (the LWR part, "Heavy Traffic") and a second one that plays bass notes.

Just like in Arranger mode, there is a simplified chord fingering system for the LWR part. Furthermore, you could release the LWR notes immediately after playing them because they will be held until you play new notes. The function that takes care of this is called "Lower Hold". See page 78 for how to switch it on.

The right half of the keyboard allows you to play one or two Upper parts. By deafult, UP1 is switched on and uses the sound "R&B B3". You can change the location of the split point (originally C4).

To select Organ mode, press the EASY SETTING ORGAN button.

Split and Whole modes

Using the SPLIT Keyboard Mode

Split means that the keyboard is divided into two halves. You can use the LWR and MBS parts in the left half, and the UP1 and UP2 parts in the right.

E-60

LWR, MBS   UP1, UP2

E-50

LWR, MBS   UP1, UP2
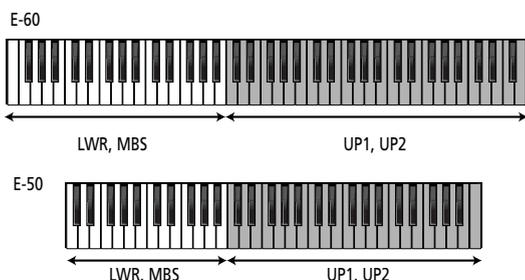
Here's how to split the keyboard:

(1) Return to the main page and press the SPLIT field.
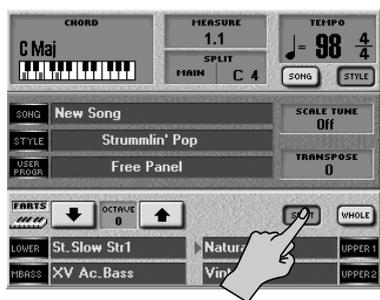
(2) Press the PART ON/OFF buttons of the parts (MBS, LWR, etc.) you want to play via the keyboard and switch off the parts you do not need.
If a part is on, its button lights.

Note: If you like, you can activate a Hold function for the LWR part. That way, briefly pressing the notes to be played by the LWR part is enough. The Arranger has a similar function (called "ARR Hold"). See "Lower Hold" on p. 78.

Note: If none of the PART ON/OFF buttons lights, the notes you play on the keyboard will not be audible. (It would, however, be possible to go on controlling the Arranger.)
Note: Your settings can be written to a User Program and recalled at a later stage. See p. 88.

■**Setting the split point**
When the SPLIT field lights, the keyboard is split in two halves. The split point is located at the C key below the display. That key is called the "C4":

E-60

Arranger control   UP1, UP2

E-50

Arranger control   UP1, UP2
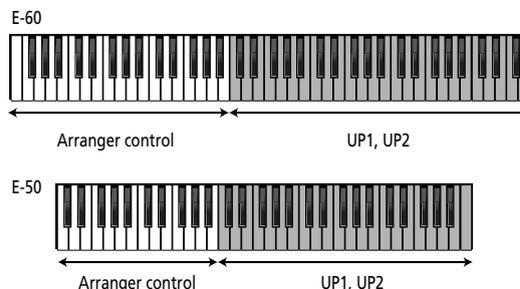
This split point applies both to the chord recognition area of the Arranger and the split between the LWR and UPP1/2 parts.

There may be situations where the automatically assigned range is not what you need. In that case, you can change the split point:

(1) Press the SPLIT field in the display.

The display now looks more or less as follows:
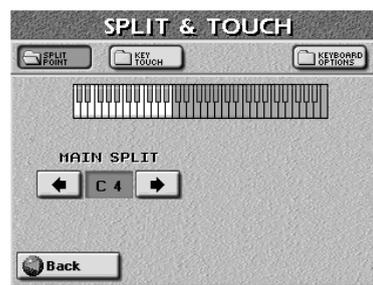
(2) Use the SPLIT POINT ◄► fields to select the new split point.
The setting range is F1~F#7 (E-60) or C#2~B6 (E-50). The darker keys in the display refer to the right half. As you can see, the "SPLIT POINT" is the lowest note of the right half.

Note: Your settings can be written to a User Program and recalled at a later stage. See p. 88.

Using WHOLE mode

Whole means that all keys trigger the same part(s). There is thus no split. You can assign up to 4 parts to the entire keyboard: MBS, LWR, UP2 and UP1.

(1) Return to the main page and press the WHOLE field.
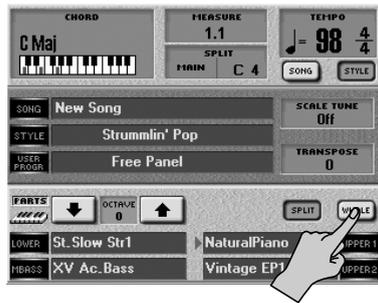
Switching parts on and off

(2) Press the PART ON/OFF buttons of the parts (MBS, LWR, etc.) you want to play via the keyboard and switch off the parts you do not need.
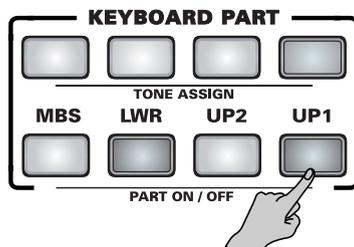
If a part is on, its button lights.

Note: If none of the PART ON/OFF buttons lights, the notes you play on the keyboard will not be audible. (It would, however, be possible to go on controlling the Arranger.)

By the way: not splitting the keyboard does not mean that the Arranger is automatically switched off or can no longer be used. See "Arranger Type (chord mode)" on p. 67 for details.

Note: Your settings can be written to a User Program and recalled at a later stage. See p. 88.

5. Using the performance functions

Let us now have a look at the E-60/E-50's performance functions. Also called controllers, they allow you to add expression to your playing, which is a very important aspect for simulating glissando's, bendings and other changes that will make your melodies even more convincing.

Pitch Bend and Modulation

The BENDER/MODULATION lever to the left of the E-60/E-50's keyboard can be used to add two kinds of effects to the Keyboard part notes (Upper, Lower, M.Bass). You can even use these effects simultaneously if you like.

(1) Press the lever towards the rear of the E-60/E-50 to add a vibrato effect ("wobble") to the notes you are playing.
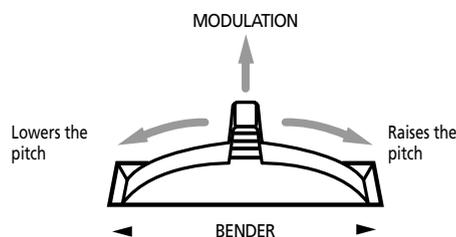
The Modulation axis can also be used for switching between the slow and fast Rotary speeds (for certain ORGAN sounds).

(2) Turn the lever to the left to temporarily lower the pitch of the notes you are playing. Turn it to the right to raise the pitch of your notes.
The Pitch Bend interval ("Range") is preset to 2 semi-tones.

(3) Release the lever if you no longer need the effect.

Transposition

If you are used to playing a song in a particular key, the Transpose function will help you go on playing in that key while sounding in another one. That way, you can accompany a singer or instrument without changing your fingering.

(1) Press the TRANSPOSE button or press the TRANSPOSE field on the main page.
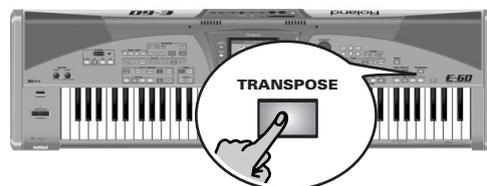
The display now looks more or less as follows:
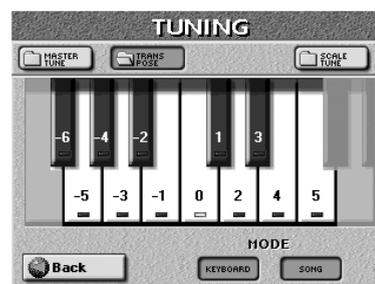
(2) In the display, press the key that corresponds to the note you would like to hear each time you play a C.
Note: Selecting "0" means that the transposition is off. Your setting can, however, be written to a User Program (page 88).

(3) Press the KEYBOARD and/or SONG field to switch it on.
These fields allow you to specify which parts should be affected by the Transpose setting:
KEYBOARD: The Keyboard parts are transposed. Since the Arranger's key depends on the notes you play on the keyboard, the Arranger parts are also transposed.

Note: Transposition never applies to a part that uses a Drum Set (or the drum part of a song).

SONG: During Recorder playback, only the song parts during Recorder playback are transposed.

Though it is perfectly possible to switch on both options, at least one of them must be on. "KEY-BOARD" could be useful for transposing only the Keyboard parts so that you can play to a song in "your" key but sound in the song's key.

Note: If you also want note messages received via MIDI to be transposed, you must set "TRANSPOSE RX (On/Off)" on p. 192 to "ON".

(4) Press the [EXIT] button to return to the main page.
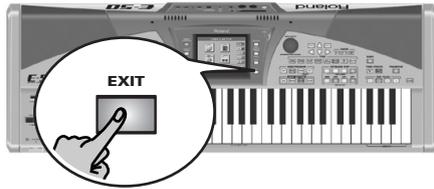
As long as the interval is different from "0", the [TRANSPOSE] button lights to signal that the Transpose function is active. To switch off the transposition function, press the [TRANSPOSE] button (or field) again, then the key that is assigned to the "0" interval.

The transposition interval is indicated on the main page:

"–1" refers to a semitone decrease of the pitch, so that you hear a "B" each time you play a "C". It also means that, rather than the "A" you press, you will hear "G sharp" (or "A flat").

Global Transpose

There is also a "master transpose control" that alters the pitch of all of the E-60/E-50's sections. Its value is added to the current transposition interval as well as User Program transposition until you reset it to "0" or until you switch off your E-60/E-50.

(1) Press the [MENU] button.

The display changes to:

(2) Press the [TUNING] field, followed by the [MASTER TUNE] field.
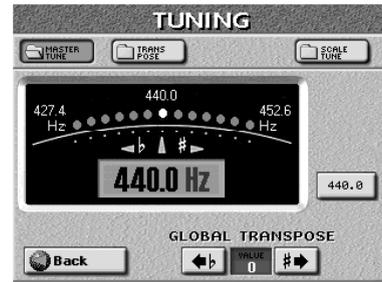
(3) Use the [◄ ♭] and [# ►] fields to transpose the E-60/E-50's pitch.

The setting range is –6~0~5 semitones. This setting applies to all sections and all User Programs.

Octave

The Octave function is another useful parameter that allows you to change the pitch of the selected part in octave steps (12 semitones at a time).

You could take advantage of this function for solo parts where you need the UP1 and UP2 parts to trigger the same Tone, while UP2 plays one octave above or below UP1. Another use for this function is to provide access to the "noises" of the E-60/E-50's new Tones so as to be able to trigger the scraping, knocking, etc.

This probably only works when you use a Keyboard part (MBS, LWR, UP2, UP1) if the keyboard is not split (page 47). Working in SPLIT mode indeed means that you can only play the notes up to a certain point (the split point). For the "noises", you need to select the setting "–3". Note that this also means that you need to play the "real" notes at the right end of the keyboard, because the entire part/Tone is transposed down.
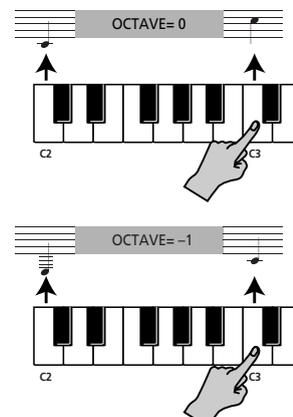
This parameter also comes in handy when you wish to trigger Drum Set sounds that are not accessible via the keyboard in its normal state. Remember that there are 61 (E-50) or 76 keys (E-60), while some Drum Sets provide drum/percussion sounds for all 128 notes supported by the MIDI standard.

(1) Use the TONE ASSIGN buttons to select of the Keyboard part you wish to transpose in octave steps.
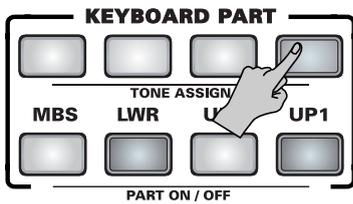
(2) If the main page is not displayed, press the EXIT button several times until it appears.

(3) Use the OCTAVE ▲▼ fields to set the desired interval (up to 4 octaves higher or lower).

(4) If necessary, repeat this with the remaining Keyboard parts.

Key Touch (velocity sensitivity)

The E-60/E-50's keyboard is also velocity sensitive. This allows you to control the timbre and volume of the Keyboard parts by varying the force with which you strike the keys.

(1) Press the MENU button.

The display changes to:

(2) Press the SPLIT & TOUCH field, followed by the KEY TOUCH field.
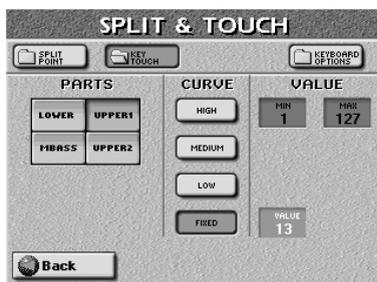
(3) Press a field in the PARTS column to select the Keyboard part whose velocity sensitivity you wish to change.

(4) Press a field in the CURVE column to set the desired velocity sensitivity:

LOW: Select this setting if you are used to playing on an electronic organ or if you do not want velocity changes to bring about major volume changes.

MID: Medium velocity sensitivity. The keyboard responds to velocity changes, but the maximum volume can be obtained more easily than with "HIGH". (This is the default setting.)

HIGH: Select this setting for maximum expressiveness. Even small variations of the force with which you strike a key produce audible changes. The trade-off is, however, that you have to strike the keys forcefully to achieve the maximum volume.

FIXED: Press this field to switch off the velocity sensitivity if you don't need it. In that case, the fixed velocity value ("100" if you don't change it) will be used. You can set another value, however:

Press the display field and use the DATA/ENTRY dial or the DEC/INC buttons to set the velocity value that should be used for all notes you play (1~127).

"1" is very low (usually inaudible), while "127" corresponds to maximum striking force (loud, bright notes).

Velocity switching (Min and Max)

You can also specify the smallest (MIN) and highest (MAX) velocity values with which you can trigger the selected part. This is probably only useful when applied to two Keyboard parts. *Do not change these values if you have no intention of using a "complementary" part* because, otherwise, you may start wondering why the LWR part, for instance, only sounds at high or low velocity values.

MIN and MAX can be used effectively for switching between two Tones simply by striking the keys harder or softer. Doing so allows you to alternate between two sounds. Consider the following example:

Part	Min	Max	Sound
UP1	1	105	Bandoneon 2 (ACCORDION, P1)
UP2	106	127	Folk Violin 2 (STRINGS, P2)

Both parts must be on. These settings allow you to trigger the Bandoneon sound with velocity values between 1 and 105 (low to relatively high velocity), while velocity values above 106 only trigger the violin.

There are countless other possibilities, such as using MIN= 80/MAX= 127 for the MELODY INTELL part (page 62), so that the automatic harmonies are only added when you really want to hear them.

(5) Press the EXIT button to return to the main page.

Master Tune

This is not really a performance function, but it allows you to tune your E-60/E-50 to acoustic instruments that cannot be tuned.

(1) Press the MENU button.

The display changes to:

(2) Press the TUNING field, followed by the MASTER TUNE field.

(3) Use the DATA/ENTRY dial to set the desired tuning.
The default value is "440.0". You can return to this value by pressing the 440.0Hz field.

(4) Press the EXIT button to return to the main page.
See page 49 for the Global Transpose parameter.

Using the D Beam Controller (E-60)

The D Beam controller allows you to control various aspects of your performance or to add something to the music, by moving your hand, head, etc., in the air. You only need to make sure that you do so over the two "eyes" and within a 40cm (±16") range. Your movements are translated into musical expression. The E-50 has no D Beam controller.

Let's first try out the DJ GEAR functions.

(1) Press the D BEAM button that is assigned to the function you wish to use (here the DJ GEAR button):
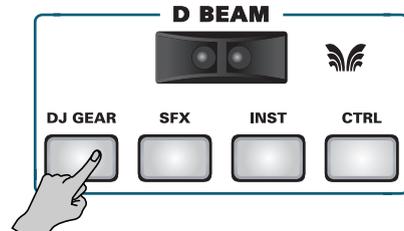
This switches on the D Beam controller, while the display changes to:
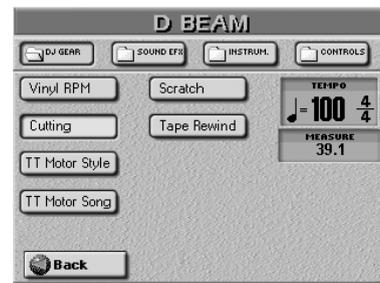
You can also select this page by pressing the MENU button→ D BEAM field→ DJ GEAR field. But the above method is a lot faster.

(2) Start playback of a Music Style (page 22) or song (page 35).

(3) Move your hand towards and away from the D Beam's "eyes".
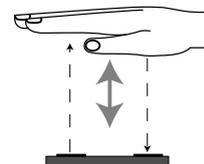
What you hear now is the "VinylRPM" effect. Now let's do some scratching...

(4) Press the SCRATCH field.

(5) Again move your hand towards and away from the D Beam.
Now you should hear a scratch sound.

Try out some other effects by pressing the SOUND EFX, INSTRUMENTS and CONTROL fields and selecting one of the available options.

(6) Press the EXIT button to return to the main page.

D Beam functions

The D Beam Controller has two sensors that detect motion (such as your hand or body movements) in front of it. These "sensed" positions are translated into MIDI messages that can be assigned to a variety of parameters.

(1) If you want to assign another function to the D BEAM without actually selecting it, press and hold the D BEAM button that is assigned to the function you wish to use.
   If you also wish to switch this function on, briefly press the corresponding button.

   There are 4 groups (DJ GEAR, SOUND EFX, INSTRUM. and CONTROLS).

(2) Press the field that corresponds to the desired function (see below).

(3) Use the DJ GEAR, SOUND EFX, INSTRUM and CONTROLS fields to select the remaining groups and assign the desired function as well.
   The assignments of all four groups (DJ GEAR, SOUND EFX, INSTRUM, CONTROLS) will be written to a User Program (one per group), so that you can also alternate between these groups while playing – and still use your favorite settings.

DJ Gear

● **Vinyl RPM**—Allows you to simulate the sound you hear when manually turning a vinyl record to locate (cue) the position where you wish to start playback.

● **Cutting**—This is a very powerful filter effect that allows you to suppress the high frequencies in a rhythmic way (like a DJ does sometimes).

● **TT Motor**—Simulates the effect you hear when you suddenly stop a turntable: the playback speed decreases, while the pitch drops and the sound becomes muffled.

● **Scratching**—The D Beam Controller can be used for adding scratch noises. You know what that is, don't you…?

● **Tape Rewind**—Allows you add the sound you hear when you rewind a cassette tape without stopping playback (the music plays backwards and at high speed).

Sound EFX

Here, you can select various "noises" to be added to your music simply by moving your hand over the D Beam. We will not try to describe them: just try them out!

If necessary, use the PAGE 1~PAGE 3 fields to go to another page.

Instrum

In this case, the D Beam will play musical notes. The pitch and chords of those patterns depend on the notes you play on the keyboard. Please try out the options on offer. It's the quickest way to find out how they sound and work.

If necessary, use the PAGE 1 and PAGE 2 fields to switch pages.

Controls

The options on this page allow you to control one of the E-60's functions:

If necessary, use the PAGE 1~PAGE 4 fields to go to another page.

Note: If you plan to use the D Beam Controller while controlling the Arranger, it is probably a good idea to activate its Hold function (page 67).

● **Start/Stop Style**—Depending on the current condition of the Arranger (running or stopped), one move inside the D Beam's range stops (or starts) it. A second movement will start (or stop) it again.

● **Start/Stop Song**—Depending on the current condition of the Recorder (running or stopped), one move inside the D Beam's range stops (or starts) it. A second movement will start (or stop) it again.

● **Fade In**—"Fade In" is a function you may want to use occasionally. Fading in means that the volume of both the Arranger (Style) and Keyboard parts gradually increases, giving the impression that you have been playing for a long time before what you play becomes audible. The volume is automatically set to zero and then gradually increased to the value specified with the MAS-TER VOLUME knob.

● **Fade OUT**—Fade Outs are extremely popular in pop music and the E-60 allows you to end a song just like the original. To do so, move your hand inside the D Beam's range. The volume then gradually decreases until it reaches zero.

● **Auto Fill**—Allows you to switch the AUTO FILL IN button (and function) on and off.

● **Fill Up**—Triggers the Fill-In that takes you to the next Variation (i.e. from MAIN "1" to "2"). You can use this function up to three times to jump to the most complex level ("Variation 4"). If you then use the D Beam again, however, nothing happens. You thus cannot cycle back to the lowest level ("Variation 1").

● **Fill Down**—Triggers the Fill-In that takes you to the previous Variation (i.e. from MAIN "2" to "1"). You can use this function up to three times to jump to the simplest level ("Variation 1"). If you then use the D Beam again, however, nothing happens. You thus cannot cycle back to the highest level ("Variation 4").

● **ADrum On/Off**—This setting allows you to switch the Arranger's ADrums part on and off using the D Beam Controller. There are also combined on/off options (see below).

● **ABass On/Off**—This setting allows you to switch the ABass part on and off using the D Beam Controller.

● **Accomp On/Off**—This setting allows you to switch the Accompaniment parts (ACC1~6) on and off using the D Beam Controller.

● **ABs+ADr On/Off**—This setting allows you to use the D Beam for switching on and off the ABass and ADrums parts.

● **ABs Acc On/Off**—This setting allows you to use the D Beam for switching on and off the ABass and ACC1~6 parts.

● **ADr Acc On/Off**—This setting allows you to use the D Beam for switching on and off the ADrums and ACC1~6 parts.

● **Tempo Up**—Select this option to increase the current Arranger or Recorder tempo. By moving your hand outside the D Beam's range, you return to the previous tempo value.

● **Tempo Down**—Select this option to decrease the current Arranger or Recorder tempo. By moving your hand outside the D Beam's range, you return to the previous tempo value.
Note: Options marked with a "°" only apply to the currently active Keyboard parts.

● **Arranger RIT Tempo**—Allows you to start the Arranger's RIT function (page 69).

● **Arranger ACC Tempo**—Allows you to start the Arranger's ACC function (page 69).

● **Reset/Start Tempo**—This function allows you have the Arranger start on the first beat of the currently selected Music Style pattern when you use the D Beam controller. Use it when you are accompanying a singer or soloist whose timing is a little shaky and suddenly notice that the Arranger lags one or two beats behind the singer/soloist.

● **Break Mute**—When you move your hand, Arranger playback is muted for the remainder of the current measure. This is great for rock'n'roll songs.

● **Pitch Up°**—By moving your hand over the D Beam, you can generate a value between "64" (no Pitch Bend) and "127" (maximum upward bend). As soon as you move your hand outside the D Beam's reach (higher than ±40cm above the "eyes" or further to the left or right), the value returns to "64" (no Pitch Bend). The maximum bend interval is two semi-tones.

● **Pitch Down°**—By moving your hand over the D Beam, you can generate a value between "64" (no Pitch Bend) and "0" (maximum downward bend). As soon as you move your hand outside the D Beam's reach, the value returns to "64" (no Pitch Bend).

● **D Modulation°**—Select this function if you want the D Beam to duplicate the modulation function of the Bender/Modulation lever.

● **Cut&Reso Up°**—(Only for Upper1 and/or 2) By moving your hand over the D Beam, you can vary the current TVF Cutoff value (see also p. 105) of the Upper1/2 part. The Resonance parameter will be set to "+63" (maximum), while the Cutoff frequency can be controlled between "0" (no change) and "+63" (maximum increase). This allows you to create some nifty filter effects that are particularly useful for Dance/Techno music. When you move your hand outside the D Beam's range, both Resonance and TVF Cutoff return to their original values ("0"= no change).
Note: If TVF Cutoff is already set to "+63", you cannot increase it using the D Beam Controller. In that case, the following option is probably more useful. Also note that some Tones already use the highest possible TVF Cutoff value by default, in which case you cannot add more overtones (by opening the filter even further).

● **Cut&Reso Down°**—(Only for Upper1 and/or 2) By moving your hand over the D Beam, you can vary the current TVF Cutoff value (see also p. 105) of the Upper1/2 part. The Resonance parameter will be set to "+63" (maximum), while the Cutoff frequency can be controlled between "0" (no change) and "–64" (lowest possible TVF Cutoff setting). When you move your hand outside the D Beam's range, both Resonance and TVF Cutoff return to their original values ("0"= no change).
Note: The TVF Cutoff frequency cannot be lowered if TVF Cutoff is already set to "–64".

● **Arpeggio Oct 1/2/3**—By moving your hand over the D Beam, you cause the D Beam part to play arpeggios (broken chords) based on the notes extracted from the current song. Depending on the setting you select here, the notes will be arpeggiated over 1, 2 or 3 octaves.
Note: Do not forget to assign a suitable Tone to the LWR part, which acts as "D Beam part".

● **Chord Oct 1/2/3**—By holding your hand inside the D Beam's range, you cause the D Beam part to sound the notes extracted from the current song. You could use this function to add syncopated brass or guitar "hits" to your melody. The velocity value used for playing these notes is "100". The number (1, 2 or 3) bears on the octave of this "added chord": *1*= A♭3~G4, *2*= A♭4~G5 and *3*= A♭5~G6. Move your hand outside the D Beam's range to stop the D Beam part from sounding the chord.

Note: Do not forget to assign a suitable Tone to the LWR part, which acts as "D Beam part".

● **Minus One**—By holding your hand inside the D Beam's range, you switch off the parts that can be muted with the MINUS ONE button at that time (page 38).

● **Rotary Slow/Fast**—Allows you to select the slow or fast speed of the Rotary effect. This only works, if the Rotary effect is currently assigned to the Multi-FX.

(4) Press the EXIT button to return to the main page.

Using optional footswitches

Sustain Footswitch (HOLD)

Also called "Hold" or "Damper" pedal, the footswitch you connect to the HOLD socket allows you to hold the notes you play on the keyboard in much the same way as on an acoustic piano. Though you cannot assign other functions to this footswitch, you can decide *when* a given part should respond to these messages.

The HOLD FOOTSW function, which specifies how the Hold pedal should behave, is available for the following parts: UP1/2, LWR and MBS If the keyboard is not split). If the keyboard is split, the sustain pedal's Hold function only works for the right-most part. When UP1/2 are layered, the Hold effect applies to those Upper parts. (This explanation applies to the "Auto" setting.)

You can also specify whether or not the Melody Intelligence function (MELODY INTELL) should respond to Hold messages.

Note: Do not forget to connect an optional DP-2, DP-6 or BOSS FS-5U footswitch to the HOLD socket.

(1) Press the MENU button.

The display changes to:

(2) Press the FOOT CONTROLLERS field, followed by the HOLD FOOTSW. field.
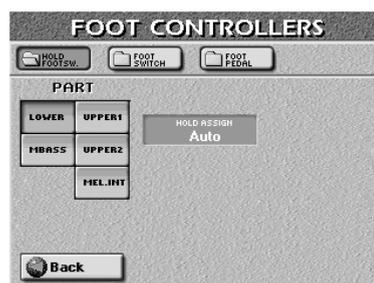
(3) Use the PART fields to select the Keyboard part whose HOLD setting you want to change.

(4) Use the DATA/ENTRY dial or the DEC/INC buttons to select the function ("HOLD ASSIGN").

"**Auto**" means that the part in question only responds to Hold messages if it is assigned to the right half or the entire keyboard. "**On**" means that the part in question always responds to Hold messages, even if it is assigned to the left half of the keyboard. "**Off**", finally, means that the part does not respond to Hold messages.

(5) If necessary, press another PART field and change the HOLD ASSIGN setting for the selected part.

(6) Press the EXIT button to return to the main page.

Foot Switch

→ *Important remark*: The settings below are only used if you connect an optional DP-2, DP-6 or BOSS FS-5U footswitch to the FOOTSWITCH/EXPRESSION socket. If you choose to connect an expression pedal instead, see "Expression (Foot Pedal)" on p. 56.

A second footswitch (in addition to the one connected to the HOLD socket) can be used to perform various functions. If you do not change the factory setting, this footswitch allows you to start and stop Arranger playback ("Start/Stop").

Note the Soft and Sostenuto options as well as the possibility to select one of several Hold functions. The footswitch can only perform one function at a time, though.

(1) Press the MENU button.

The display changes to:
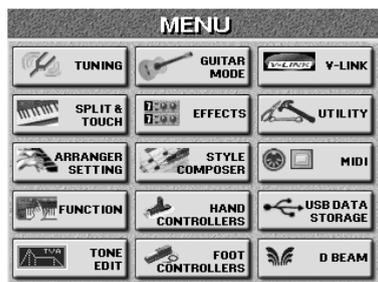
(2) Press the FOOT CONTROLLER field, followed by the FOOT SWITCH field.

(3) Press the field that corresponds to the function you wish to assign to the footswitch.
If necessary, use the PAGE 1 ~ PAGE 3 fields to go to another page.

- ● **Start/Stop**—Starts and stops Arranger playback. Same function as the START/STOP button.
- ● **Play/Stop**—Starts and stops the Recorder and 16-track sequencer. Same function as the PLAY/STOP ►/■ button.
- ● **Intro**—Selects the Intro of the current Variation level (1~4) during Arranger playback. Same function as INTRO.
- ● **Ending**—Selects the Ending of the current Variation level (1~4) during Arranger playback.
- ● **Variat 1~4**—The footswitch can be used to switch to the VARIATION level you select here. That Music Style pattern is used from the next downbeat onward.
- ● **Bass Inversion**—Same function as the BASS INVERS button (page 61).
- ● **Arr/M.Bass**—Allows you to set the Arranger Chord parameter to "Off" (chord recognition *plus* ABS recognition off, see p. 66) and, at the same time, activate the KBD MODE SPLIT button and the MBS part – and vice versa.
- ● **Piano/Standard**—You can alternate between *Standard* and *Piano Style* Arranger Chord modes. When the former is selected, the chord recognition area (page 67) is automatically set to "LEFT". When you switch to *Piano Style*, the chord recognition area is automatically set to "WHOLE". Furthermore, the KBD MODE WHOLE button is switched on and the Upper 1 part is activated (if it was off).
- ● **Half Bar on Fill In**—The footswitch allows you to switch the Half Bar function on and off. Certain pop songs in 4/4 contain bars that only last two beats. The usual place for such a bar is between the first and the second verse. This does not change Style playback right away. Pressing the footswitch does not change Style playback right away. Only when a Fill-In or another MAIN division starts will the Half Bar function be activated and play half the number of beats of the accompaniment pattern you selected.
- ● **Arranger Hold**—Allows you to switch the Arranger Hold function on and off. See p. 67.
- ● **Dynamic Arranger**—Allows you to switch the Dynamic Arranger function on and off. See page 67 for details.
- ● **Rotary Slow/Fast**—Allows you to select the slow or fast speed of the Rotary effect. This only works, if the Rotary effect is currently assigned to the Multi-FX.

● **Reset/Start**—This function allows you have the Arranger start on the first beat of the currently selected Music Style pattern when you press the footswitch. Use it when you are accompanying a singer or soloist whose timing is a little shaky and suddenly notice that the Arranger lags one or two beats behind the singer/soloist.

● **Scale Upper**—Allows you to assign the selected Scale Tune (see p. 57) setting to the Upper parts.

● **Scale Lower**—Allows you to assign the selected Scale Tune (see p. 57) setting to the LWR part.

● **Arr Chord Off**—Allows you to switch the Arranger's chord recognition off, in which case only the drum/percussion of the selected Music Style keeps playing (or can be used). See also (page 66).

● **User Prg Up, User Prg Down**—Allows you to select the next ("Up") or previous ("Down") User Program.

● **Punch In/Out**—The footswitch can be used to activate and switch off punch in/out recording using the E-60/E-50's sequencer (page 126).

● **Portamento**—Switches the Portamento function (page 77) on and off.

● **Soft, Sostenuto, Hold**—The footswitch can be used as a Soft, Sostenuto or Sustain (Hold pedal). Note that "Hold" can also be controlled using a dedicated (but optional) DP-2, DP-6, or BOSS FS-5U footswitch connected to the HOLD socket.

● **Hold Lower**—The footswitch does the same as the LOWER HOLD function (see also p. 78).

● **Minus One**—The footswitch allows you to switch the Minus-One function on and off. See page 38 for how to select the option that will be used when the Minus-One function is on.

● **Keyboard Ex UP2/1**—Allows you to switch off the UP1 part and activate the UP2 part – and vice versa.
Note: If neither UP1 nor UP2 are on when you first press the footswitch, one of them is activated.

● **Break Mute**—This function can only be accessed via the footswitch. When you press it, Arranger playback is muted for the remainder of the current measure. This is great for rock'n'roll songs.

● **Arranger ACC Tempo**—Allows you to start the Arranger's ACC function (page 69).

● **Arranger RIT Tempo**—Allows you to start the Arranger's RIT function (page 69).

(4) Press the EXIT button to return to the main page.

Expression (Foot Pedal)

An optional EV-5, EV-7 or BOSS FV-300L expression pedal connected to the FOOTSWITCH/EXPRESSION socket allows you to control the volume of all parts by foot. You can reverse the expression pedal's effect and specify that certain parts are not to be controlled by the expression pedal.

Note: The settings below are only used if you connect an expression pedal to the FOOTSWITCH/EXPRESSION socket. If you choose to connect a footswitch instead, see "Foot Switch" on p. 55.

(1) Press the MENU button.

The display changes to:

(2) Press the FOOT CONTROLLER field, followed by the FOOT PEDAL field.
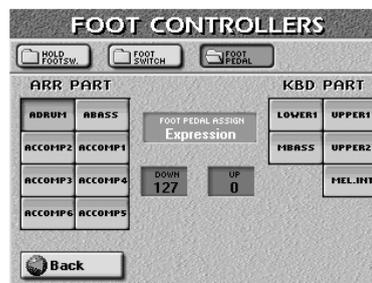
(3) Use the ARR PART and KBD PART fields to select the Arranger or Keyboard part whose setting you want to change.

(4) Press the FOOT PEDAL ASSIGN field and use the DATA/ENTRY dial or the DEC/INC buttons to select "Expression".
Select "Off" if the part in question should not respond to movements of the expression pedal.

(5) Press the UP or DOWN field and use the DATA/ENTRY dial or the DEC/INC buttons to set the value.

You can also press the DATA/ENTRY dial to call up the on-screen NUMERIC PAD.

Enter the value you want to use, then press the ENTER field. If necessary, you can use the Delete field to correct erroneous entries before pressing ENTER.

UP and DOWN refer to the volume that is used when the expression pedal is depressed (UP, highest volume) or in the upright position (DOWN, lowest volume).

● UP/DOWN (0~127)—You do not need to specify "0" for the DOWN position. Selecting any other value will reduce the volume of the selected parts up to the "DOWN" value. Likewise, you do not need to specify "127" as maximum value (for "UP").

Note: If you select "Expression", the DOWN and UP values represent MIDI Expression (CC11) values.

It is perfectly possible to set the DOWN value to "127" and the UP value to "0", so that the selected part only sounds when the Expression pedal is in the upright position. This can be used for some clever effects: instead of alternating between UP1 and UP2 by varying your velocity (page 50), which requires a considerable "striking precision", you could invert UP2's response to the expression pedal, so that UP1 does not sound when UP2 does and vice versa.

(6) Press the EXIT button to return to the main page.

Scale Tuning

Another useful function is called Scale Tuning. It allows you to use oriental, Asian and other scales in much the same way as on an oriental keyboard.

The E-60/E-50 contains three memories where you can store your favorite tunings. These are three global memories that apply to all User Programs.

(1) Press the MENU button.
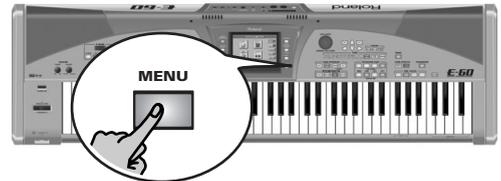
The display changes to:

(2) Press the TUNING field, followed by the SCALE TUNING field.

(3) Press a MEMORY 1~MEMORY 3 field to select a Scale Tune memory.
This will change the pitch of the following notes ("–50" means that the note in question is tuned a quarter tone down):

Memory 1	Memory 2	Memory 3
E (–50)	E (–50)	C♯ (–50)
B (–50)	A (–50)	F♯ (–50)

The pitch of the other notes is left unchanged. The button icons corresponding to the notes whose pitch is changed "light" for easy identification.

You will notice that every note can be selected only once. That is because the value you specify applies to all notes of the same name. If you change the tuning of the "C", that value is added to or subtracted from, all Cs (C1, C2, C3, etc.).

If you now returned to the main page, you would notice that the E-60/E-50 alerts you to the fact that the Scale Tuning function has been switched on ("Off", "On", "Mem 1~3"):

But let us not return to the main page just yet.

■ Changing the pitch of other notes

Changing the pitch of other notes than the ones already highlighted is a matter of pressing the desired on-screen buttons in question. And defeating the pitch change of a note whose button icon "lights" is as easy as pressing that field again (the button icon then goes dark).

Press all lit on-screen button icons to switch the Scale Tuning function off again.

■ Customizing the pitch changes

At first, pressing an on-screen button means that its pitch is lowered by 50 cents (1/4 tone or "–50"). There may be situations where you want to raise the pitch of a note or select a different tuning:

(4) Press the value field of the note/key whose pitch you want to change.

That field now "lights". As stated earlier, the pitch of all notes is at first set to "–50" (one quarter tone down). You can, however, select any value between "–64" (slightly lower than a quarter tone down) and "63" (slightly higher than a quarter tone up).

(5) Use the DATA/ENTRY dial or the DEC/INC buttons to set the desired pitch.
You can also press the DATA/ENTRY dial and enter the value using the on-screen numeric pad.
If you selected a MEMORY field, the "EDIT" message is displayed to indicate that the stored settings have changed.

(6) Repeat steps (4) and (5) for the other notes whose pitch you want to change.
Note: This pitch is only used when the corresponding button icon lights. Do not forget to switch it on.

(7) Press the UP PARTS and/or LW PART field to specify which Keyboard parts are affected by the Scale Tune settings: Upper 1/2 and/or Lower. It is perfectly possible to switch on both fields. If neither of them lights, all of the E-60/E-50's parts will adopt the Scale Tune setting.

(8) Press the STYLE PARTS field if the parts played by the Arranger should be affected by your Scale Tune settings.

■ Storing your new scale

If you think you'll need that scale in the future, you should memorize –or "WRITE"– it:

(9) Program the scale you wish to save by switching the desired notes on or off (see above).

(10) Press the WRITE field in the upper left corner of the display.
The display now looks as follows:

(11) Press a MEMORY 1~MEMORY 3 field to save your settings in the corresponding Scale Tune memory.

(12) Press the EXIT button to return to the main page.

Metronome

The E-60/E-50 is equipped with a metronome that can be used in various situations. To use the metronome, here is what you need to do:

(1) Press the METRONOME button (so that it lights).

(2) Start Arranger or song playback and you will hear the metronome.

(3) Press the METRONOME button again to switch off the metronome.

Metronome settings

The E-60/E-50 also allows you to specify when and how the metronome should sound:

(1) Press and hold the METRONOME button.
The display now looks as follows:
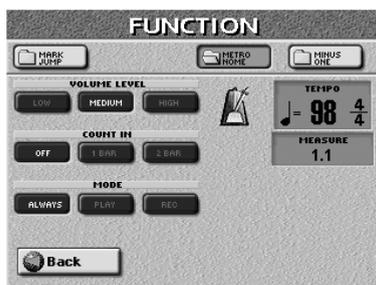
Note: When neither the Arranger nor the Recorder/16-track sequencer is running, the METRONOME button flashes to indicate the current tempo.

(2) Set the available parameters to your liking:

■**VOLUME LEVEL**
Press the LOW, MEDIUM or HIGH field to specify the metronome's basic level. The default setting is MEDIUM.

■**COUNT IN**
This parameter allows you to switch the Count-In function on (to "1 BAR" or "2 BAR") or off. When on, the metronome will count in the specified number of measures (bars) before the Arranger starts playing.

Note: This count-in is also available when you are using the Sync Start function. In that case, playing a chord means that the Arranger only starts after 1 or 2 measures.

OFF: The count-in function is off.
1 BAR, 2 BAR: Whenever you start Arranger playback, the metronome counts in 1 or 2 bars before the selected Music Style pattern starts playing.

Note: The Count-In function can be used independently of the metronome. There is thus no need to activate the metronome in order to hear the count-in.

■MODE
Yet another option on the above display page is to specify *when* the metronome should sound:

ALWAYS: The metronome even counts when playback is stopped. Press this field if you want to hear the metronome at all times (which is probably only useful when practising a new song).

PLAY: Press this field if the metronome should only sound while the Arranger or Recorder is playing.

REC: Press this field if the metronome should only sound during song or Music Style recording (see pages 123 and 151).

The metronome signal is transmitted to the OUTPUT MAIN and PHONES sockets.

(3) Press the EXIT button to return to the main page.
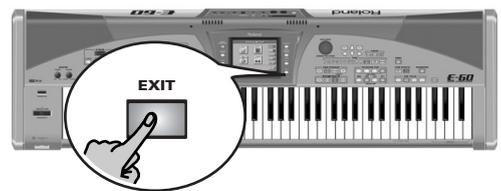
6. Additional Arranger/Style functions

Before telling you even more about the Music Styles, allow us to explain the difference between Music Styles and the Arranger. The Arranger is a kind of sequencer that plays back the accompaniments you select. Those accompaniments are always related to a given musical genre (or "style") and are therefore called "Styles". The E-60/E-50's accompaniments are a lot more than just one pattern that goes on playing until you stop it: they comprise several patterns (or divisions).

Arranger parts

Each accompaniment (or Music Style) consists of up to eight parts:

ADR: Accompaniment drums. This part takes care of the rhythm section. It triggers the drum and percussion sounds of the Drum Set assigned to the ADR part.

ABS: Accompaniment bass. This part plays the bass line of the Music Style you select.

ACC1~ACC6: These are the melodic accompaniment parts. Depending on the Music Style you selected, only some of them actually play something, which can be anything from a piano line, a guitar line, an organ line, etc., to synthesizer chords. Not all ACC parts play chords, though.

The ABS and ACC1~6 parts rely on the chord or note information you play in the *chord recognition* area (page 66), i.e. the keyboard zone you assign to the Arranger.

Playback functions (Style Control)

Starting a Music Style
Music Styles can be started in several ways:

(1) Press the EASY SETTING [ARR] button (its indicator lights).

• Press the [START/STOP] button (it flashes) to start the Arranger right away.
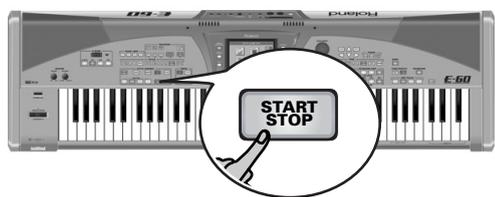
Note: See "Song/Arranger Start Priority" on p. 196 if Arranger playback does not start.

If you start the Arranger without playing a chord in the chord recognition area beforehand, you will only hear the drums of the selected Style. In most cases, however, the E-60/E-50 has already memorized a chord, so that you will hear the full accompaniment.

—or—

• Stop playback of the current Style (see below), press the [INTRO] button (so that it lights), one of the VARIATION [1]~[4] buttons to select the "complexity" of the introduction and then the [START/STOP] button. This starts Style playback with a musical introduction.

The length of the Intro depends on the Style you select. At the end of the Intro, the Arranger switches to the [MAIN] pattern you selected with one of the VARIATION buttons.
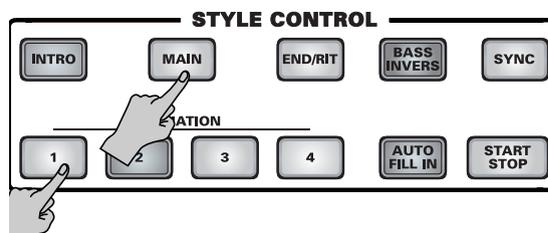
Note: The Intro is "renewable", i.e. you can press the [INTRO] button again while the Intro is playing. Doing so on the fourth beat of the first Intro bar, for instance, will retrigger the beginning of the Intro in the second bar.

—or—

• Press the [SYNC] button and play a chord (or just one note in INTELLIGENT mode, see p. 67). In this case, the Arranger starts as soon as you play a note or chord in the chord recognition area (see p. 66).
Note: Do not play chord changes while the Intro is running. Unlike the MAIN patterns, INTRO patterns usually contain chord changes. Chord recognition is not deactivated during Intro playback, so that the beginning of a song may jump from one key to another in a rather unnatural way. Chord recognition during Intro (and Ending) playback can be switched off, however (see "Intro & Ending Alteration" on page 67).
Note: You can also start and stop the Arranger with the D Beam controller (page 53).

Stopping Style playback
There are three ways to stop Style playback:

• Press [START/STOP] to stop playback right away.
—or—

• Press the [END/RIT] button (so that it lights) and one of the VARIATION [1]~[4] buttons to activate the Ending function. The Ending (or coda) pattern will start at the beginning of the next measure (next downbeat).
Note: Do not play chord changes while the Ending is running. Unlike the MAIN accompaniments, ENDING patterns usually contain chord changes. Chord recognition is not deactivated during Ending playback, so that the ending of a song may jump from one key to another in a rather unnatural way. Chord recognition during Ending (and Intro) playback can be switched off, however (see p. 67).

—or—

• The E-60/E-50 also provides a **SYNC STOP** option (which is combined with Sync Start): press ⎣SYNC⎦ twice so that the button starts to flash. This will cause the Arranger to stop playback as soon as you release all keys in the chord recognition area. This is great for songs where you need breaks (i.e. one or several beats of silence).
There is no need to restart Style playback manually, because the flashing pattern means that Sync Start is also active. So if you repress one or several keys, Arranger playback resumes. (Press the ⎣SYNC⎦ button yet again to switch off this function.)

About Sync Start & Stop
If you've never used an arranger keyboard before, the status of the ⎣SYNC⎦ button is the single most important function to look out for after switching on your instrument. If it is on, playing just one note on the keyboard may cause the Arranger to start playing when you don't want it to.
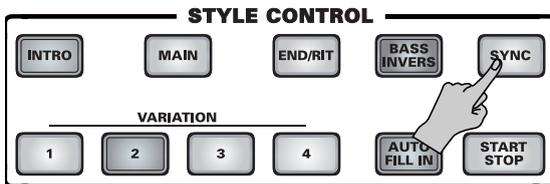
Once you get to know the E-60/E-50 a little better, you will appreciate this function, though.

SYNC START means that the Arranger starts as soon as you play a note or chord in the chord recognition area of the keyboard. (If the EASY SETTING ⎣ARR⎦ button lights, this area is the left half of the keyboard. See p. 66 for details.)

Selecting other Style divisions

You can "professionalize" your performance with the Arranger by selecting different accompaniment patterns.

Here's a quick overview of how the E-60/E-50's Music Styles are structured:

MAIN VARIATION ⓵ The simplest of the four basic accompaniment patterns. This pattern is ideal for the first verse of a song.

MAIN VARIATION ⓶ A slightly more complex pattern. Consider using it for the second and third verses.

MAIN VARIATION ⓷ This pattern could be used for the first chorus(es).

MAIN VARIATION ⓸ This is the most complex accompaniment that could be used for the final choruses and/or the bridge.

The numeric button you press flashes until the new pattern is used (after which the button lights steadily).

You can use fill-ins (transitions) to go from one MAIN VARIATION pattern to the next by switching on the ⎣AUTO FILL⎦ button before pressing another (or the lighting) MAIN VARIATION ⓵~⓸ button.
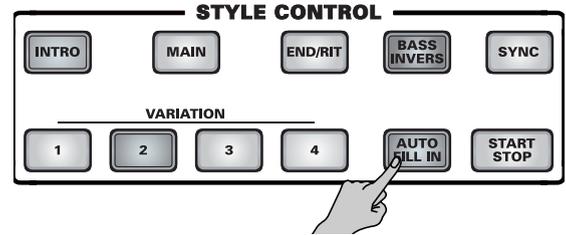
The fill-in that is played between the current and the next VARIATION pattern depends on where you come from. Each transition from one VARIATION pattern to another (e.g. from ⓵ to ⓶) is different from the others (from ⓶ to ⓷, from ⓷ to ⓸ and from ⓸ to ⓵).

There are three Fill-Ins for the upward direction ("Up") and three for downward moves ("Dw").

Note: You can also press ⎣INTRO⎦ in the middle of a performance. In that case, the button flashes until the end of the current bar, and then lights on the next downbeat to indicate that the Arranger is playing the introductory pattern.

Other ways of selecting Arranger patterns
You can also switch among Style patterns using a footswitch. Here are the pattern selection functions you can assign:

D Beam (E-60) Fill Up, Fill Down (page 53)

Foot Switch Intro, Ending, Variat 1~4, Half Bar on Fill In (page 55)

Bass Inversion
The ⎣BASS INVERS⎦ button allows you to change the way the Arranger reads the chords you play.

If this function is off, the A.BASS part (ABS) plays the root of the chords that feed the Arranger, while the chords of the ACCOMP 1~6 parts are voiced in such a way as to avoid semitone intervals (for complex chords) that wouldn't sound very nice.

Bass Inversion gives you more artistic license because *you* specify the notes played by the ABS part. Switch on Bass Inversion for songs that rely on bass rather than on chord patterns (for example C – C/B – C/B♭, etc.).

(1) Press the ⎣BASS INVERS⎦ button (so that it lights) to switch this function on.
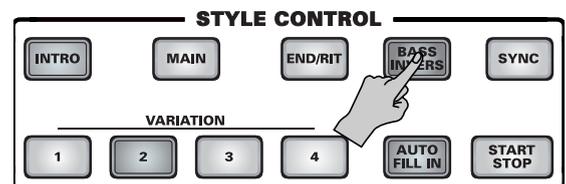
(2) Press it again to switch this function off again.
Note: You can also assign this function to an optional footswitch (page 55).

Melody Intelligence

The Arranger can add a counter-melody to the notes you play. Those automatic harmonies are based on the chords you play in the chord recognition area.

This counter-melody is played by the MELODY INTELL part. There are 18 harmony types to choose from.

(1) Press the MELODY INTELL button (so that it lights).
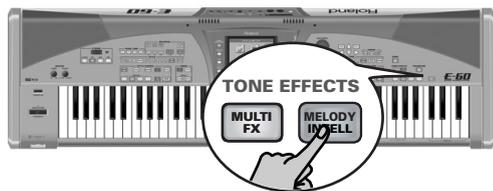
This adds a harmony to the notes you play. Do not forget to switch on the UP1 part (page 47).

(2) To select another harmony type, press and hold the MELODY INTELL button until the following page appears:

(3) Press the field of the desired harmony type (TYPE). Selecting a Harmony Type also means that the E-60/E-50 automatically assigns a suitable sound to the MELODY INTELL part (e.g. a trumpet and sax sounds for *Big Band*, etc.). More specifically, the following sounds are added to the UP1 part (which also plays certain "intelligent" melody notes):

Type	UP1 sound	MEL INT sound
DUET	Trumpet	Brass 1
ORGAN	Chorus Or	Chorus Or
COMBO	Clarinet	Trombone
STRINGS	Strings	St Slow Str
CHOIR	St. Choir Aahs	St. Choir Aahs
BLOCK	Vibraphone w	Piano 1w
BIG BAND	Trumpet	St.Tenor Sax
COUNTRY	Jazz Gt.	JC Chorus Gt.
TRADITIONAL	The Grand X	–
BROADWAY	Celesta	Theater Org.
GOSPEL	Trem. Organ	St.Choir Aahs
ROMANCE	Strings	Nylon StrGt
LATIN	The Grand X	–
COUNTRY GUITAR	Jazz Gt.	Nylon StrGt
COUNTRY BALLAD	The Grand X	–
WALTZ ORGAN	Theater Org.	Trem.Organ

Type	UP1 sound	MEL INT sound
OCTAVE TYPE 1	The Grand X	–
OCTAVE TYPE 2	The Grand X	–

If a second sound is available (this depends on the selected TYPE), the display looks as follows:
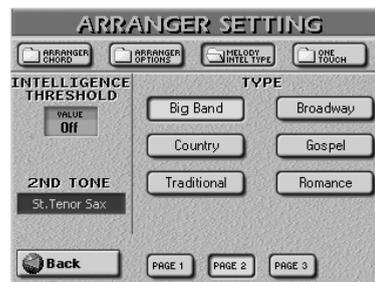
(4) If the desired option is not displayed, use the PAGE 1~PAGE 3 fields to select another page.
Note: For "Traditional", "Latin", "CntryBallad", "OctaveType1" and "OctaveType2", only the UP1 part is used. All other Melody Intelligence types use both the UP1 and the MELODY INTELL part, however.

As shown in the table above, selecting a different TYPE also means that the sound assigned to the UP1 part changes. Most TYPEs add a second sound to it (called "2ND TONE").

(5) Press the 2ND TONE field and use the E-60/E-50's standard procedure to select a different sound for the additional harmony notes.
Note: This function is not available for TYPEs that provide no ("–") MELODY INTELL sound.
Note: While the MELODY INTELL button on the front panel is off, the 2ND TONE name appears on a gray background (if available). In this state, you cannot select a different sound. Switch on the MELODY INTELL button (and the function of the same name) if you need to select another sound for 2ND TONE.

You can refine Melody Intelligence control by specifying what velocity value the UP1 notes must have in order to trigger the MELODY INTELL part. This allows you to leave the MELODY INTELL button on at all times, while only adding harmonies to your solo playing during the choruses by hitting the keys a little harder.

(6) Use the DATA/ENTRY dial or the DEC/INC buttons to set the desired "Threshold".
You can also press the DATA/ENTRY dial and enter the value using the on-screen numeric pad.
The "Threshold" value represents the lowest velocity value (between "1" and "127") of the UP1 part that triggers the MELODY INTELL part. If you don't need this switching function, select "Off".

(7) Press the EXIT button to return to the main page.

(8) Press the MELODY INTELL button once again to switch off this function.
Note: All MELODY INTELL settings can be written to a User Program and recalled at a later stage. See p. 88.

Linking MELODY INTELL type selection to the Styles (Style Melody Intell Link)

By default, the E-60/E-50 automatically loads the MEL-ODY INTELL type that is suited for the Styles you select. If you don't need this automatic selection, here is how to switch it off:

(1) Press the MENU button.
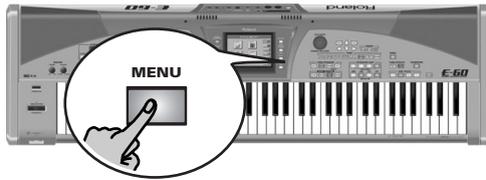
The display changes to:

(2) Press the UTILITY, then the GLOBAL field.
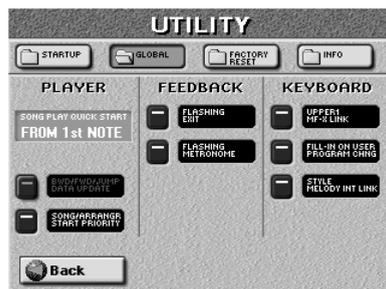
(3) Press the STYLE MELODY INTELL LINK field to switch it off. If it is on, the E-60/E-50 assigns a suitable MELODY INTELLIGENCE type to each Style you select.

(4) Press the EXIT button to return to the main page.

Using the Style Cover function

The COVER function provides "masks" that change the instrumentation of the selected Style. Simply by selecting another preset, you can cause a Viennese waltz to be played back by a heavy metal band, etc. Even though the arrangement (rhythm, riffs) does not change, the Style's character can be modified beyond recognition.

(1) Press the COVER button once or twice to select the display page shown below.

(2) Select the parts whose instrumentation you want to change:
 • Press the ALL field if all instruments should be replaced.
 • Press the DRUM field if only the drum and percussion instruments should change.
 • Press the BASS field if you're happy with everything but the bass line's sound.

(3) Press one of the six fields in the lower half of the display to select another preset.
 Press ORIGINAL (page 1) to return to the original orchestration.

(4) If none of the displayed presets appeal to you, use the PAGE ◄ ► fields at the right to jump to another page with different presets.

(5) If you like the new version better than the original one, press the SAVE field to save the Style to the internal memory, a memory card or floppy disk (see p. 64).
 Note: The COVER information is part of the data only the E-60/E-50 (E-80 or G-70) understands.
 Note: You can also modify the COVER settings yourself (see p. 102).

■Saved Version

The STYLE COVER page contains a [SAVED VERSION] field that works as follows:

There can be three different versions of each Style.

[1] The original Style without COVER settings. This version can be selected by pressing the [ORIGINAL] field on page 1.

[2] The same Style that uses one of the COVER presets. This version can be saved using the [SAVE] field. If you save this version, the Style will use the COVER settings whenever you select it using the standard procedure (see p. 25) or the Style Finder (see p. 73).

[3] A Style saved with the [SAVE] field, which you recall and then alter by selecting another COVER preset (without saving this version).

In case [3], the [ORIGINAL] field on the STYLE COVER page temporarily restores the original version with no COVER data. To return to version [2] after selecting a different COVER preset, press the [SAVED VERSION] field.

Note: Saving a Style with a COVER preset affects all User Programs that refer to this Style.

Freeze Data

Press this field to "commit" your orchestration changes and change them to MIDI messages the Style Composer (page 151) can read. Changes you don't commit are ignored by the Style Composer. Note that "freezing" data is only necessary if you intend to edit a Style using the Style Composer, or to ensure that the settings can no longer be modified by accident.

Saving a Style with a COVER alteration

As stated above, you can decide to change any Style on a more or less permanent basis by saving it with the selected COVER preset (or STYLE MAKEUP TOOLS settings, p. 102).

(1) On the STYLE COVER page, select the desired COVER preset (see above).

(2) Press the [SAVE] field.

The display changes to:

This page allows you to save the current Style to the internal memory, a memory card or a floppy disk. It will be saved along with the COVER settings you selected.

(3) Press the [EXTERNAL MEMORY], [FLOPPY] or [INTERNAL MEMORY] field to specify where you want to save the Style.

(4) Enter the name for the file.
See page 44.

Note: The E-60/E-50 supports both upper- and lower-case letters for file names. Choose whichever is more convenient (or clearer).

(5) Press the [EXECUTE] field to save the data.
If the selected memory area already contains a Style of that name, you are asked whether it is OK to overwrite it.

- Press the [YES] field to overwrite the file.
- Press the [NO] field to return to the SAVE STYLE page, change the name, then press [EXECUTE] again.
The data are saved and a "Operation Successful" message confirms the end of the operation.

Note: To return to the Style's original version, select it, press the [ORIGINAL] field on the STYLE COVER page, then save it again using the procedure described above.

Note: If you save a factory Style under a different name, you can no longer select the new version using the STYLE buttons (see p. 25). Such "customized" Styles can be assigned to a CUSTOM memory (see p. 70) or recalled using the Style Finder (see p. 73).

One Touch

You may find yourself using the One Touch function at regular intervals, because it automates quite a few tasks. The E-60/E-50's One Touch memories are actually "miniature User Programs" that go way beyond anything you may know from other arranger instruments.

(1) Press a ONE TOUCH button.
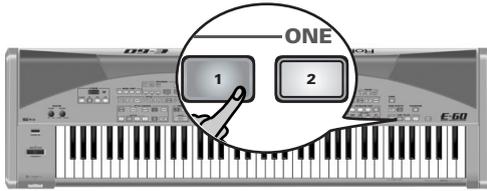
There are four One Touch memories per Music Style (for the 136 factory Styles and 80 CUSTOM memories).

(2) Select a Style (page 25) and start Arranger playback (see p. 60).

(3) Play a melody to the accompaniment.
You will notice that the sound of the UP1 (or any other Keyboard part) matches the style and mood of the selected Style.

(4) Select a different Style and again play a solo line: the active Keyboard parts now use different sounds.

(5) Press another ONE TOUCH button.

(6) Press the same button again if you no longer need the One Touch setting.
As you see, the One Touch memories apply to all Keyboard parts.

Note: If a One Touch memory is active while you recall a User Program, the One Touch function is switched off.

■ **If you select a One Touch memory while another one is already active**
In that case, the E-60/E-50 immediately selects of the settings of that memory and thus changes the registration.

Ignoring certain One Touch settings (Hold)
The E-60/E-50 provides several "HOLD" options that allow you to filter certain One Touch settings.

(1) Press and hold a ONE TOUCH 1~4 button.
The display changes to:

(2) Press the fields corresponding to the settings that should not be loaded when you select another One Touch memory or Music Style.
When you change a setting, the field of the last One Touch memory you selected is indicated by means of an asterisk (*). Button icons in the HOLD column whose indicator lights refer to settings that are not updated:

● TEMPO—The preset tempo of the selected Music Style.
● KBD PART—The current status of the Keyboard parts (UP1/2, LWR and MBS). The on/off status of the Keyboard parts can be saved to a One Touch memory.
● INTRO/ENDING—The INTRO or ENDING pattern is no longer activated when you select Styles.
● MAIN VAR—When you select another Style, the E-60/E-50 no longer loads the memorized MAIN VARIATION 1~4 pattern, but goes on using the last pattern you selected.

Press the ALL field to switch on all HOLD options. Press NONE to switch all options off.
Note: The One Touch function is switched off whenever you select a User Program.

(3) Press the EXIT button to return to the main page.

Programming your own One Touch settings (WRITE)
The E-60/E-50 allows you to save your own ONE TOUCH settings for the selected Style. This may come in handy for CUSTOM Styles (see page 70) for which there are no "presets".

These customized One Touch settings are stored within the Styles themselves.

(1) Press and hold a ONE TOUCH 1~4 button.
The display changes to:

(2) Press the WRITE field (it lights).

(3) Press the 1~4 field that should contain your new One Touch settings.

The display now shows the following message:

The target One Touch memory you chose for writing is automatically selected.

(4) Press the EXIT button to return to the main page.

More refined Arranger settings

Chord recognition area (ZONE)

Telling the E-60/E-50 that you want to use the Arranger is a matter of pressing the EASY SETTING ARR button. In that case, the key of the Style patterns is controlled by the chords you play in the left half of the keyboard.

You can also tell the Arranger to scan another part of the keyboard for usable chords. Though **LEFT** is probably the most popular setting, you can also select **RIGHT** to have the Arranger scan the right half of the keyboard. Select **WHOLE** if the Arranger should scan the entire keyboard. If you don't want the Arranger to "listen" to the chords you play, choose **OFF**. In that case, you will only hear the drum parts of the Music Styles you select.

The range of the LEFT or RIGHT keyboard area depends on the main split point (see "Setting the split point" on page 46).

(1) On the main page, press the CHORD field.
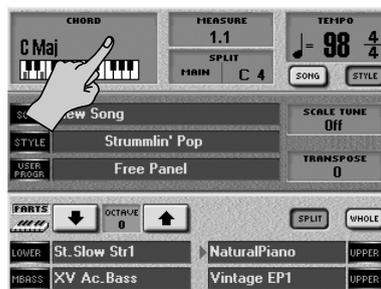
You can also select this page by pressing MENU button➔ ARRANGER SETTINGS ➔ ARRANGER CHORD.
The display changes to:
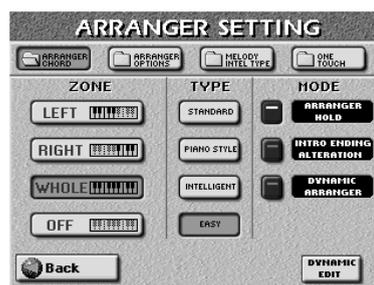
(2) Press the ZONE LEFT, WHOLE, RIGHT or OFF field to select the chord recognition area.

(3) Press the EXIT button to return to the main page.
Note: When you press the EASY SETTING ARR button, the LEFT setting is selected.
Note: "OFF" can also be assigned to an optional footswitch (see "Arr Chord Off" on page 56).

Arranger Type (chord mode)

Another important choice is how you want to transmit note information to the Arranger.

(4) Press the $\boxed{\text{STANDARD}}$, $\boxed{\text{PIANO STYLE}}$ or $\boxed{\text{INTELLIGENT}}$ field.

● STANDARD—This is the normal chord recognition mode. The melodic accompaniment uses the notes you play in the chord recognition area ("ZONE"). If you play only one note in that area, the accompaniment plays only that note, i.e. it assumes that you deliberately chose to omit the third and fifth of your "chord".

To have the Music Style sound a major, minor or seventh chord, you only need to play three notes, by the way. Other, more complex, chords require that you press four keys.

● PIANO STYLE—This mode works as follows: the Arranger decodes every chord you play – no matter where you play it. Causing the Arranger to play another chord requires that you play at least a triad (i.e. the three notes that make up a major or minor chord). You can play more than three chord notes but remember that two notes won't cause the Arranger to change the key.

Note: You can also select PIANO STYLE by pressing the EASY SETTING $\boxed{\text{PIANO}}$ button.

● INTELLIGENT—Select INTELLIGENT when you want the Arranger to supply the missing notes of the chords you play. See p. 209 for a chart of intelligent chords and the way to play them. This is probably the mode you will select most of the time.

● EASY—This is another "intelligent" chord fingering system used on instruments by other manufacturers. It works as follows:

Major chords	Press the key that corresponds to the chord's fundamental.
Minor chords	Fundamental + any black key to the left of the fundamental.
Seventh chords	Fundamental + any white key to the left of the fundamental.
Minor seventh chords	Fundamental + any black key to the left + any white key to the left.

(5) Press the $\boxed{\text{EXIT}}$ button to return to the main page.

Note: The choice you make here also affects the "Arpeggio Oct" and "Chord Oct" options of the D Beam Controller. See page 53.

Arranger Hold

The ARRANGER HOLD function sustains the notes you play in the chord recognition area ("ZONE") until you play other notes. This function is switched on by default, so that you can briefly play the chord for a given bar and then release all keys in the chord recognition area. If the $\boxed{\text{ARRANGER HOLD}}$ icon indicator is dark, the melodic accompaniment (bass and other parts) stops as soon as you release all keys in the chord recognition area (only the drums keep playing).

(1) Select the ARRANGER SETTING page (see step (1) of "Chord recognition area (ZONE)" on p. 66).
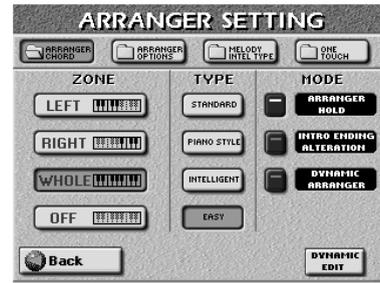
(2) Press the $\boxed{\text{ARRANGER HOLD}}$ button icon to switch the function off (dark) or on (lights).

(3) Press the $\boxed{\text{EXIT}}$ button to return to the main page or continue with the next step.

Intro & Ending Alteration

If the Intro and Ending patterns sound odd when you start a song with a rather unusual chord ("Csus4", for instance), switch off the ALTERATION function. In that case, the "special" chord is memorized, but the Intro or Ending uses the normal chord progression (e.g. C, Am, F, G). If this button icon is on, however, the chord progression of the selected Intro (or Ending) pattern is adapted to the first chord you play – which may lead to odd results.

If ALTERATION is off, the Arranger only switches to the "special" chord once the Intro/Ending is finished.

(1) Select the ARRANGER CHORD page (see step (1) of "Chord recognition area (ZONE)" on p. 66.

(2) Press the $\boxed{\text{INTRO ENDING ALTERATION}}$ button icon to switch that function off (dark) or on (lights).

(3) Press the $\boxed{\text{EXIT}}$ button to return to the main page or continue with the next step.

Dynamic Arranger

The DYNAMIC ARRANGER function allows you to control the volume and timbre of the Arranger parts via the way you strike the keys in the chord recognition area (velocity sensitivity).

(1) Select the ARRANGER CHORD page (see step (1) of "Chord recognition area (ZONE)" on p. 66.
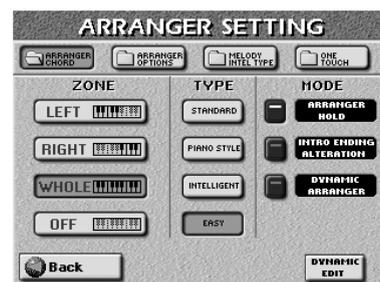
(2) Press the $\boxed{\text{DYNAMIC ARRANGER}}$ button icon to switch the Arranger's velocity sensitivity off (dark) or on (lights).

This function only becomes meaningful if you also specify how the various Arranger parts should respond to your velocity.

(3) Press the DYNAMIC EDIT field.
The display changes to:
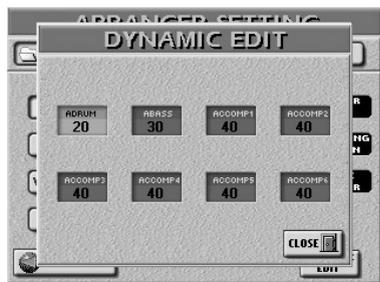
(4) Press the field of the Arranger part whose velocity sensitivity you wish to change.
There are eight Arranger parts: A.DRUMS (the drums), A.BASS (the bass) and ACCOMP 1~6 (the melodic accompaniment parts).

(5) Set the desired value with the DATA/ENTRY dial or the DEC/INC buttons.
You can specify positive and negative sensitivity values. Positive values mean that the volume of the part in question increases when you strike the chord recognition area keys harder, while negative values mean that the volume of the selected Arranger part increases as your velocity becomes softer.

You could use extreme positive/negative ACCOMP pairs (i.e. "127" and "–127") to alternate between those two lines simply by varying your velocity. One part would then only be audible when you strike the keys softly, while the other would only be triggered by high velocity values.

Choose "0" for parts whose volume should not be affected by your velocity values.

(6) Press the CLOSE field to return to the ARRANGER CHORD page.

(7) Press the EXIT button to return to the main page.

Tempo-related settings (Arranger Options)

The E-60/E-50 provides two parameters that allow you to "play" with the Style tempo:

(1) Press the MENU button.

The display changes to:

(2) Press the ARRANGER SETTING field, followed by the ARRANGER OPTIONS field.
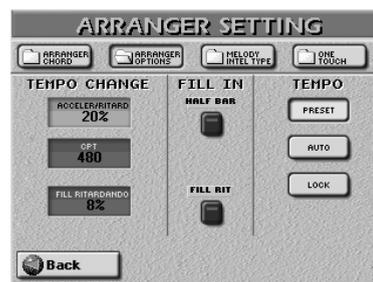
Style Tempo

Let us briefly summarize everything that has already been said about the tempo:

• Each Music Style has a preset tempo that is recalled whenever you select that Style or when you take advantage of the One Touch function (page 65). The One Touch function, however, allows you to filter the tempo setting (by activating TEMPO, which means that the preset tempo is no longer loaded automatically).

• On the other hand, you are free to change a Music Style's tempo any time. See "Changing the tempo" on p. 25. That value can be written to a User Program and will then be set every time you select that User Program.

• The Style (and also song) tempo is displayed on the main page.

PRESET, AUTO and LOCK allow you to specify what happens when you select another Style:

	If Arranger playback is stopped when you select another Style	If the Arranger is running when you select another Style
PRESET	The Style's preset tempo is loaded.	
AUTO	The Arranger loads the preset tempo of the new Style	The new Style is played back at the tempo of the previous Style.
LOCK	The preset tempo of the new Style is not loaded. Instead, the Style will be played at the current tempo.	

TEMPO CHANGE (RITARD and ACCELER)

The ACCELER/RITARD parameter allows you to speed up or slow down the Style tempo by the amount you set here. To use these functions, you must assign them to the D Beam controller or an optional footswitch.

There are three Ritardando functions: one for all Style patterns, one for Ending patterns and one for Fill-Ins. They all use the TEMPO CHANGE settings on the following page.
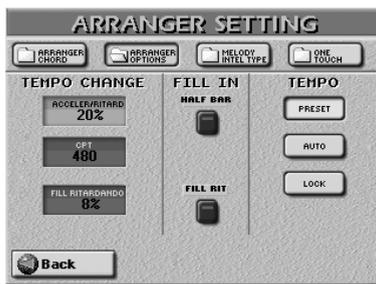
(1) **Press the field of the parameter whose value you wish to change.**
Parameter fields can also be selected using the DATA ENTRY ◄► buttons.

(2) **Set the desired value with the DATA/ENTRY dial or the DEC/INC buttons.**
● **ACCELER/RITARD**—Allows you to set the degree (ratio) by which the tempo changes when the ACCELER or RITARD function is triggered. Example: if the tempo is currently ♩= 100, the value "20%" means that the tempo drops to ♩= 80 or rises to ♩= 120.

(3) **Press the first field (ACCELER/RITARD) and use the DATA/ENTRY dial or the DEC/INC buttons to select the ratio by which the tempo should increase/decrease.**
● **CPT (15~3825)**—Use this parameter to specify how long a Ritardando/Accelerando should take. In most cases, 480 CPT (i.e. one measure) is probably the most musical choice.

■Using the Ritardando/Accelerando functions

(4) **For general applications (any Style division) proceed as follows:**
● Assign the RITARD and/or ACCELER function.
  D Beam controller   page 53
  Footswitch   page 56

● Press the START/STOP button to start Style playback.
● Move your hand over the D Beam controller or press the footswitch. By assigning both controls, you can increase (ACC) and decrease (RIT) the tempo.

(5) **For Ritardandos that apply to Ending patterns proceed as follows:**
● Press the START/STOP button to start Style playback.
● Press the END/RIT button twice in succession ("double-click").
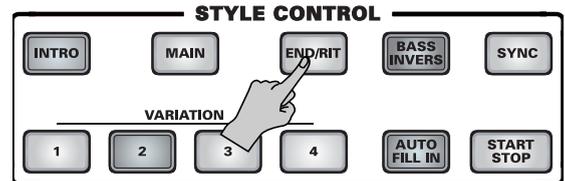
This selects an Ending pattern and slows down the tempo according to the ACCELER/RITARD and CPT settings. When the Ending phrase is finished (and Arranger playback stops), the tempo is reset.

(6) **For Fill Ritardando:**
The FILL RIT function is suitable for ballads. It causes the next Fill-In to slow down ("ritardando").
● Switch on the AUTO FILL-IN button.
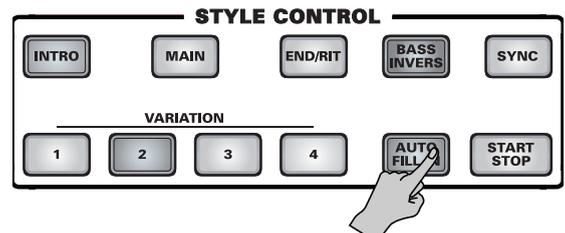
● Press the MENU button.
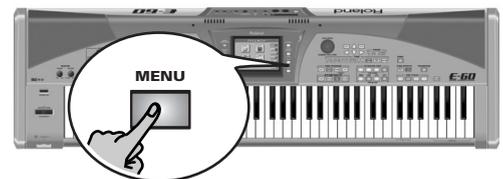
• Press the ARRANGER SETTING field, followed by the ARRANGER OPTIONS field.
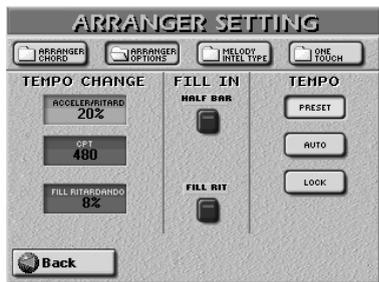
• Start Arranger playback and press the FILL RIT button icon to switch it on.

• Press the MAIN and a VARIATION 1~4 button. The E-60/E-50 plays a Fill-In. The tempo slows down while the fill is being played. At the end of the fill, the Style returns to the previously set tempo (this is called "a tempo").

• Press the HALF BAR button icon to switch on the Half Bar function. Certain pop songs in 4/4 contain bars that only last two beats. The usual place for such a bar is between the first and the second verse. Another favorite position for "halved" bars is at the end of a chorus or the bridge. Pressing this button icon does not change Style playback right away. Only when a Fill-In starts will the Half Bar function be activated and play half the number of beats of the fill you selected.

(7) Press the EXIT button to return to the main page.

Working with 'external' Styles

Using the CUSTOM memories

The E-60/E-50 provides 10 memories per family (i.e. 80 in all) that refer to Styles in the internal memory ("INTERNAL MEMORY") or on a memory card ("EXTERNAL MEMORY"). These memories behave exactly like the factory memories.

In the case of a memory card, however, they only "work" if the card in question has been inserted into the PCMCIA slot. Thanks to the E-60/E-50's powerful software, loading a CUSTOM Style is as swift as working with the factory Styles.

The Style referenced by the CUSTOM memory you select is automatically loaded and copied to the **Disk User** memory (see also p. 72). This is a RAM memory whose contents are erased when you switch off the E-60/E-50 and overwritten when you select another CUSTOM memory (or use the Disk User function).

Here's in a nutshell what happens when you select a CUSTOM memory. (Even though the drawing may suggest that this takes quite some time, the E-60/E-50 performs these steps in a split second.)
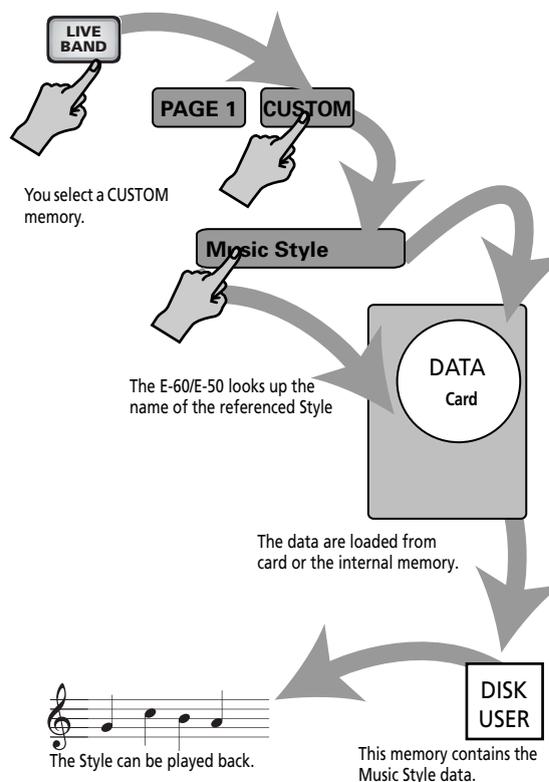
When you unpack the E-60/E-50, the CUSTOM memories are empty. So you first need to program your own references to Styles.

Programming CUSTOM assignments

The E-60/E-50 comes with several Style examples in internal memory you could use to try out the following. Once you start working with your E-60/E-50, you will probably copy external Music Styles to the internal memory and establish CUSTOM links to those.

Note: Use the Copy function (see p. 75) to copy all Styles to the same card (or the internal memory).

(1) Press a button of the STYLE pad to select a Music Style family.
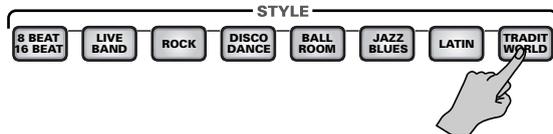
Its indicator lights and the display looks as follows:

(2) Press the CUSTOM field.

(3) Press the field of the memory you wish to assign a Style to.
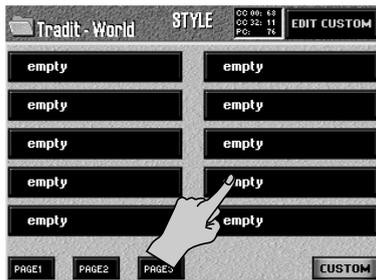
(4) Press the EDIT CUSTOM field.

(5) Press the INTERNAL MEMORY or EXTERNAL MEMORY field.

This is necessary to specify whether you want to link a Style in the internal memory or on a card in the PCMCIA slot.

(6) Press the field that contains the name of the Style you want to assign to the selected CUSTOM memory.

If necessary, use the PAGE ← → fields or the DATA/ENTRY dial/the DEC/INC buttons to select another group of 5 Styles.

Note: If you can't seem to find the Style you wish to assign and if you know it exists in the selected memory area, check the "FOUND" value. It should indicate the same figure as the "GLOBAL" entry. You can also use the Finder for locating the desired Style. See p. 73 for details.

Note: It is perfectly possible to use "older" Styles with the E-60/E-50. They are automatically converted to the new VARIATION ①~④ system.

(7) Press the GET IT field.

The E-60/E-50 returns to the "STYLE" page. The name of the selected Style appears in the field you selected before pressing the EDIT CUSTOM button.

You could now program other assignments if you wanted to.

Note: CUSTOM assignments are stored internally but they are not part of the User Programs. Thus, you can "only" program 80 links in all (rather than 80 per User Program).

Note: CUSTOM settings reside in a global memory whose contents are saved together with all User Program Set data. Use "Save User Program Set" on p. 177 for saving the settings.

■**Selecting CUSTOM Style memories**

The Style names are important for locating the Styles. If you change the name of a Music Style that is referenced by one of the CUSTOM memories, the E-60/E-50 no longer finds it. Conversely, if you have two memory cards that both contain a Style called "Reggae1", even inserting the "wrong" card would recall a "Reggae1" Style – but it might be the wrong one (and quite a few other CUSTOM memories might not recall any Style at all, because the other names only exist on the "other" card).

(1) Press a button of the STYLE pad to select a Music Style family.

Its indicator lights and the display looks as follows:

(2) Press the CUSTOM field.

(3) Press the field of the Music Style you want to use.

In some cases, an error message ("File not found") displayed at this point means that the card does not contain the referenced file.

Note: If you do not want to use the Style after all, press EXIT. In that case, the E-60/E-50 keeps on using the last Style it did find.

Disk User

You can also load one Music Style directly into the E-60/E-50's Disk User memory and use it. You could take advantage of this function whenever none of the CUSTOM memories refer to the Music Style you need for playing a given piece. As its name implies, you can also use this function for working with Styles on floppy disk.

Note: The Music Style in this memory is only available until you switch off the E-60/E-50 or load another Style. Be aware that selecting a CUSTOM memory also overwrites the last Disk User Style you selected.

(1) If necessary, insert the memory card or floppy disk with the desired Music Style into the slot or disk drive.

(2) On the STYLE page (see above), press the DISK USER field.

The display changes to:

(3) Press the EXTERNAL MEMORY, FLOPPY or INTERNAL MEMORY field to select the memory area that contains the desired Style.

Note: It is perfectly possible to use "older" Styles with the E-60/E-50. They are automatically converted to the new VARI-ATION 1~4 system.

(4) Press the field that contains the name of the Style you want to load.

(5) If the desired Style is not displayed, use ←→ to select another group of 5 Styles.
You can also use the DATA/ENTRY dial and the DEC/INC buttons for selecting other pages with different Music Styles.

Note: The E-60/E-50 contains a powerful search engine for quickly locating the desired Music Style on a card or in the internal memory (page 73). It is not available for Styles on floppy disk, however.

The display page does not change when you select a Style. This was done to allow you... to load another Style.

(6) Start playing with the newly selected Style.
The selection of the DISK USER Style will be written to a User Program (page 88). The User Program in question refers to the name and memory area. Next time you recall such a User Program, the E-60/E-50 will therefore use the referenced Style.

If the Style in question cannot be found, an error message appears and the E-60/E-50 goes on using the previously selected Style.

(7) Press the EXIT button to return the main page.
The name of the selected Style appears in the STYLE field.

Style Finder: quickly locating Styles

The E-60/E-50 allows you to have a great many Music Styles handy: in its internal memory, on a memory card and on floppy disks. For the internal memory and the memory card in the PCMCIA slot, there is a powerful Finder function for quickly locating the Style you need. Here is how to use this function:

(1) Press the FINDER STYLE button.

The display changes to:

"FOUND": found entries.
"GLOBAL": total number of Styles in that memory area.

(2) Specify the memory area that contains the Style you need: EXTERNAL MEMORY, FLOPPY or INTERNAL MEMORY.

The E-60/E-50 is shipped with several Styles that reside in its internal memory.

The display shows a list of 5 Styles in the selected memory area (internal, memory card or floppy disk).

(3) If the name of the Style you want to use to is already displayed, press its line.
In our example, "%Shuffle" has been selected.

(4) To display the next 5 Styles, press the PAGE ➡ field in the lower right corner.
You can press this field as many times as necessary (or until it is no longer displayed).

To return to a previous group of 5 Styles, press ⬅. You can also select the DATA/ENTRY dial and the DEC/INC buttons to switch pages.

Quick location of the Style you need
There are several ways of quickly locating the Style you are after:

■Sorting files
Press the COUNTRY, GENRE or TEMPO field to sort the Music Style files according to country, kind of music (Genre) or tempo value. The right column now contains the selected entry (only one of them can be displayed along with the Style name).
Continue with step (3) to select the Style you want to use.

If you pressed the FLOPPY field, these options are not available and the display looks as follows:

The information in these columns are supplied by a special file in the internal memory or on a memory card called "**Database**".
You can also supply the above information for your own Styles.

Note: Music Styles you load from floppy disk and then save to a card or the internal memory are not automatically modified to include this Database information. You need to program it yourself. See "Rename" on page 75.

■Using the Index function
The highest hierarchical level of the Style Finder database is called "Index". All search operations apply to the selected Index (and therefore not necessarily to all files in the internal memory or on a memory card).

• After performing step (2), press the INDEX field in the upper left corner.

• Either press the field that corresponds to the desired Style category or –if you're not sure which category the Style belongs to– press ALL.

• Now return to the previous page by pressing BACK. The display returns to the page shown under step (1) above. This time, however, only the Styles belonging to the selected Index are displayed.

Continue with step (3) to select the Style you want to use.

■Searching for Music Styles

The powerful part starts as soon as you press the
[FINDER] field.

Decide what you want to look for

- Press the [STYLE NAME] field if you want the E-60/
E-50 to look for Style names, then enter the name (or
part of it).
- Press the [COUNTRY] field if you want to look for a
country, then enter the name (or part of it).
- Press the [GENRE] field to locate a specific genre
(Rock'n'Roll, 16-Beat, etc.), then enter the desired
characters.
- Press the [TEMPO] field and enter the tempo value
you are looking for.
Note: It would be a good idea to enter at least 2 characters,
possibly even 3 so as to narrow down your search to a "work-
able" size.

Search the database

The next step is to decide how the Style Finder should
look for files:

- Press the [ALPHABETIC ORDER] field to search for all
entries that start with the characters you entered
("BEA", for example). Files that match the specified
criteria will be displayed at the top of the list.
The order depends on the button icon you activated
([STYLE NAME], [COUNTRY], [GENRE] or [TEMPO]).
- Press the [Search Only] field to have the E-60/E-50
search the selected entry for files that contain the
supplied information. (This would allow you to also
locate a file called "Raggabeat" if you entered "BEA".)
- See page 44 for how to enter characters.
- The [Delete] field allows you to delete the character
indicated by the cursor. Press and hold it to clear all
characters.
- To enter numbers without cycling through the char-
acters first, press the [NUM LOCK] field. After enter-
ing the numbers, switch it off if you need to enter
characters again.
- Press the [FIND] field to start your search.

Note: If no Styles were found, the following message appears
and no file names are displayed (in which case you need to
press the [STYLE NAME], [COUNTRY], [GENRE] or [TEMPO] field
to display all entries again):

- Press the field of the Style you need and do your
thing.
If the E-60/E-50 did find one or several matches, the
"FOUND" number will be smaller than the "GLOBAL"
number.

Editing the Style Finder information

The Finder information is based on search criteria that
need to be added to Style files. By default, Style files do
not contain them.

Options

After pressing the FINDER [STYLE] button, the display
looks as follows:

The [OPTIONS] field in the lower left corner provides
access to a display page where you can add database
information. This also works for Styles that already
contain entries you wish to modify.

(1) First select the Style whose database information
you wish to change or edit by pressing its field.

(2) Press the [OPTIONS] field.

(3) Now do one of the following:

■**Rename**
This function allows you to change (or supply) the STYLE NAME, COUNTRY, and/or GENRE information of the selected Style (the TEMPO value is fixed, but could be changed using a STYLE COMPOSER function, p. 162).

• Press the ⎡STYLE NAME⎤, ⎡COUNTRY⎤ or ⎡GENRE⎤ field and enter the desired characters (see p. 44).
Note: If you select a Style on floppy disk, only the STYLE NAME and FILE NAME can be edited.

• Press the ⎡EXECUTE⎤ field.

■**Delete**
This function allows you to delete the selected Style from the internal memory, a memory card or floppy disk. You should use this as sparsely as possible – and probably **never for the internal memory**. Once a Style is gone, there is indeed no way to restore it.

• Press the ⎡DELETE⎤ field. The following question is displayed:

⎡YES⎤ deletes the Style file.

⎡NO⎤ leaves the file intact and takes you back to the initial Style Finder page with the Style list.

⎡Back⎤ leaves the file intact and takes you back to the STYLE LIST page.

■**Copy**
This function allows you to copy the selected Style to another memory area.

Note: It is perfectly possible to use "older" Styles with the E-60/E-50. They are automatically converted to the new VARI-ATION ⎡1⎤~⎡4⎤ system.

Even though you can already select the files you wish to copy on this page, there is no need to select a Style prior to pressing the ⎡OPTIONS⎤ field on the STYLE LIST page. Be aware, however, that the COPY page only lists the Music Styles that match the last search criteria you used for the STYLE FINDER.

On the other hand, if you only need to copy certain Styles on memory card or in the internal memory area, using the FINDER would be a good idea: it helps you to avoid too many presses of the PAGE ⎡◄⎤ or ⎡►⎤ field. You can also use the ⎡DATA/ENTRY⎤ dial and the ⎡DEC⎤/⎡INC⎤ buttons.

• On the STYLE OPTIONS page, press the ⎡COPY⎤ field.

• Start by specifying the source that contains the Style(s) you wish to copy: Press the ⎡FROM⎤ button icon once or twice to select the memory area.

INT MEMORY: The E-60/E-50's internal memory area.

FLOPPY DISK: The floppy disk in the E-60/E-50's drive. Do not forget to insert it before selecting this option.

EXT MEMORY: The memory card in the E-60/E-50's PCMCIA slot. Do not forget to insert it into the slot before selecting this option.

• Now specify the target you wish to copy the selected Style(s) to: Press the ⎡TO⎤ button icon once or twice to select the memory area.

• If the name of the Style you want to copy to is already displayed, press its line.
You can also select several Styles. In our example, "%Shuffle" and "%Slow Rock 2" have been selected.

To display the next 5 files, press the ⎡►⎤ field in the lower right corner or use the ⎡DATA/ENTRY⎤ dial.

You can press the field as many times as necessary (or until it is no longer displayed). To return to a previous group of 5 Styles, press ⎡◄⎤ or use the ⎡DATA/ENTRY⎤ dial.

To copy all Styles that are currently displayed (on all available pages) from the FROM to the TO area, press the ⎡ALL FILES⎤ field.

Note: If the target media (memory card or floppy disk) is not formatted, a message will be displayed that allows you to format it before the Styles are copied.

(4) If you chose "EXT MEMORY" or "FLOPPY DISK" disk for "TO", disable the card's/disk's write protection and insert it into the PCMCIA slot or disk drive.
To disable the write protection of a floppy disk, close the "little window" (see p. 11). See the owner's manual of the memory card for how to disable its write protection.

(5) Press the ⎡EXECUTE⎤ field. (Press ⎡Back⎤ if you do not want to proceed or to select other files.)

You are asked whether it is OK to overwrite all files on the destination media ("TO") that have the same file names as the files you are about to copy.

(6) Press the YES field if it is OK to overwrite files with the same names on the destination media. Press the NO field if files on the source ("FROM") media that have the same name as existing files on the destination ("TO") media should not be copied (only files with "original" names will be copied in that case).

The data are copied and a "Successful" message confirms the end of the operation.

(7) Press the EXIT button to return to the main page.

7. Advanced Keyboard part functions

Tuning Upper2: Coarse Tune and Fine Tune

The UP2 part can be used as full-fledged solo or melody sound or to "fatten" the sound of UP1.

To layer the UP1 and UP2 parts, you need to switch them both on. See page 26 for details.

The following parameters allow you to transpose (Coarse) or to detune (Fine) the Upper2 part relative to the Upper1 part.

You could use **COARSE** to program an interval of a fifth (7 semitones) for UP2, which is especially effective for brass sounds and guitar power chords.

Do not forget to activate both the UP1 and UP2 parts when you want to take advantage of the COARSE and FINE parameters. If only the UP2 part is active, your solos may sound flat.

(1) Press the MENU button.

MENU

The display changes to:

(2) Press the SPLIT&TOUCH field, followed by the KEYBOARD OPTIONS field.
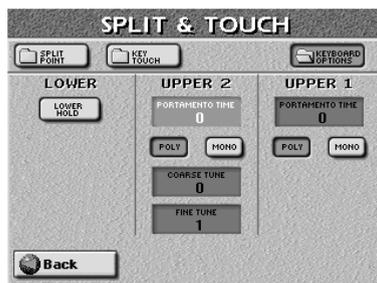
(3) Press the COARSE TUNE field if you want to change the UP2 part's pitch in semitone steps. That field now "lights".

(4) Set the desired value with the DATA/ENTRY dial or the DEC/INC buttons.

"–" means that UP2's pitch is lowered, while values without a "+" sign mean that UP2's pitch is shifted up. A very popular setting for UP1/UP2 layers is "+12" for UP2, so that it sounds one octave above Upper1 or any other active Keyboard part. (The setting range for this parameter is –24~24.)

(5) Press the FINE TUNE field to change UP2's pitch in small steps (cents).

(6) Set the desired value with the DATA/ENTRY dial or the DEC/INC buttons.
FINE TUNE can be set between "–99" (almost a semi-tone down) and "99" (almost a semi-tone up).

(7) Press the EXIT button to return to the main page.

Portamento for UP1 and UP2

Here are two functions that may come in handy for even more impressive solos involving the UP1 and UP2 parts.

Portamento Time

(1) Press the MENU button.
The display changes to:

(2) Press the SPLIT&TOUCH field, followed by the KEYBOARD OPTIONS field.
"Portamento" means that the pitch doesn't change in clearly defined steps: it produces glides from one note to the next.

[Portamento Time= 0]
"Rough" pitch changes in semitone steps (normal)

[Portamento Time= 1~127]
Pitch glides from one note to the next
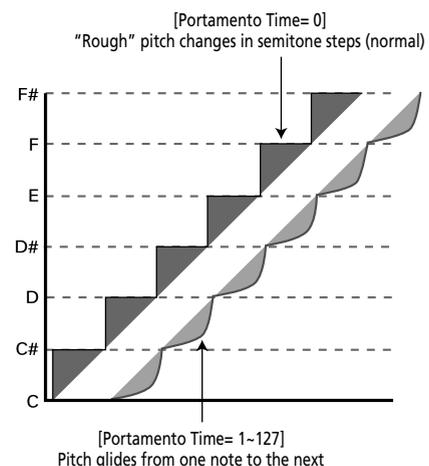
Instead of jumping in semitone steps (as you would expect), the pitch glides from one note to the next whenever the Portamento time is higher than "0". The higher the value you set, the slower the glide. This effect is particularly useful for synthesizer sounds.

(3) Press the PORTAMENTO TIME field of the Upper1 (UP1) or Upper2 (UP2) part to select it.

(4) Set the desired value with the DATA/ENTRY dial or the DEC/INC buttons.

Portamento Mode: Mono/Poly

The E-60/E-50 also allows you to set the Upper1 and Upper2 parts to mono(phonic) mode. MONO means that you can only play one note at a time. You could select this mode to play a trumpet or woodwind part in a more natural way. POLY, on the other hand, means that you can play chords using the selected part.

(5) Press the MONO or POLY field of the Upper part whose setting you want to change.

(6) Press the EXIT button to return to the main page.

Lower Hold

The E-60/E-50 is an instrument that allows you to change many settings in realtime. Because you can trigger the LWR part and the Arranger simultaneously, selecting another Music Style pattern usually means that you have to lift your left hand from the keyboard.

If the LOWER HOLD function is not active in ARR mode, the LWR part stops sounding as soon as you release all keys in the left area.

If you press the LOWER HOLD field, however, the notes of that Lower part go on sounding until you play other notes in the left keyboard area.

Note: The LOWER HOLD functions are only available in SPLIT mode.

(1) Press the MENU button.

The display changes to:

(2) Press the SPLIT&TOUCH field, followed by the KEYBOARD OPTIONS field.
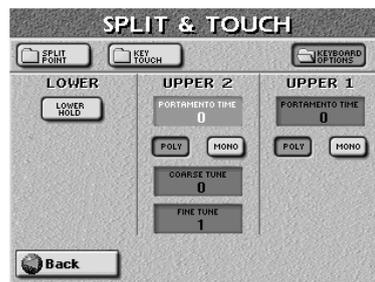
(3) Switch on the LWR part (its PART ON/OFF button must light).

(4) Press the LOWER HOLD field to switch it on.

(5) Play a short note in the left half of the keyboard and release the key.
This note goes on sounding until you press another note or chord in the left half of the keyboard.
Note: This setting can also be switched on and off with an optional footswitch (see p. 56).

(6) Press the EXIT button to return to the main page.

Tone Edit: editing Keyboard parts

Your E-60/E-50 allows you to edit certain parameters that affect the way a Keyboard part sounds by adjusting their brilliance, their modulation speed (Vibrato Rate) and so on.

The parameters discussed here only apply to the following Keyboard parts: Upper1, Upper2, Lower, .Bass. Be sure to select the part you wish to change before actually editing it.

Assigning another Tone to a Keyboard part resets the TONE EDIT parameters.

Note: All TONE EDIT parameters are relative parameters whose values are added to or subtracted from the preset sound parameter values. That is why you can specify both positive ("more") and negative ("less") values.

Note: The TONE EDIT settings can be saved to a User Program.

(1) Press the MENU button.
The display changes to:

(2) Press the TONE EDIT field.

(3) Press the field of the Keyboard part you wish to edit.
Note: Rather than performing steps (1)~(3), you could also press and hold the corresponding TONE ASSIGN button.

(4) To quickly reset all parameters, press the INIT ALL VALUES field.

(5) To reset only the selected parameter, press the INIT SINGLE VALUE field.

(6) To edit one of the displayed parameters, press its field.
Its "display" is now surrounded by a frame.

(7) Set the desired value with the DATA/ENTRY dial or the DEC/INC buttons.

Here are the parameters you can edit:

■ C1

The function of this parameter depends on the sound you assigned to the selected part. It may influence the filter and resonance setting, switch between organ samples with fast and slow Rotary modulation (TONE ORGAN sounds), etc. Here's an example: select the "B3 Sermon" sound on page 1 of the ORGAN/ACCORD bank and use this function.

Note: The C1 parameter is only available for Tones that are flagged with a tick in the "Parameter Reference" booklet.

■ Modulation (Vibrato)

Vibrato is an effect created by modulating the pitch. Pitch modulation adds a pleasant "wobble" to the notes you play. Use the following three parameters if you think the part in question has too much (or could use a little more) vibrato.

Note: Some sounds already contain natural (sampled) vibrato whose depth or speed cannot be changed.

● DELAY [–64~63]—This parameter adjusts the time required for the vibrato effect to begin. Positive (+) settings increase the time before vibrato will begin and negative settings shorten the time.

● DEPTH [-64~63]—This parameter adjusts the intensity of the pitch modulation. Positive (+) settings mean that the "wobble" becomes more prominent, while negative (–) settings make it shallower.

● RATE [-64~63]—This parameter adjusts the speed of the pitch modulation. Positive (+) settings make the preset pitch modulation faster and negative (–) settings make it slower.

■ TVF/TVA ENV (envelope)

The volume of an instrument changes over time, from the moment the note begins to sound to when it disappears. This change can be indicated on a graph as shown in the display. The envelope shape is unique to each instrument and is an important element in how we distinguish the sounds we hear. The envelopes of musical instrument sounds can change depending on how the instrument is played. For example if a trumpet is played sharply and strongly, the attack will be quick and the sound will be sharp. But if a trumpet is played lightly and softly, the attack will be softer. In order to adjust the attack of a sound, you can modify the ATTACK parameter of the envelope.

The envelope parameters affect both the volume (TVA) and the filter (TVF). The cutoff frequency will rise as the envelope rises and fall as the envelope falls.

● ATTACK [–64~63]—This parameter adjusts the onset of the sound. Negative values speed up the attack, so that the sound becomes more aggressive.

● DECAY [–64~63]—This parameter adjusts the time over which the sound's volume and Cutoff frequency fall from the highest point of the attack down to the sustain level.
Note: Percussive sounds usually have a sustain level of "0". Piano and guitar sounds are in this category. Holding the keys for a long time will thus have little effect on the duration of the notes you are playing, even if you select a high value here.

● RELEASE [–64~63]—This parameter adjusts the time over which the sound will decay after the note is released until it is no longer heard. The cutoff frequency will also fall according to this setting.

■TVF (filter)

By modifying the filter settings, you can control the timbre (tone) of the sound. The E-60/E-50 uses *Low-Pass Filters* (LPF) that allow only frequencies below the specified frequency to pass. The frequency where the filter starts "cutting off" harmonics (or overtones) is called the "Cutoff Frequency". The cutoff frequency can change over time, controlled by the envelope.

● RESO [–64~63]—This is a parameter one invariably associates with a synthesizer. When the Resonance value is increased, the overtones in the area of the cutoff frequency will be emphasized, creating a sound with a strong character.

Note: For some sounds, negative (–) RESO settings may produce no noticeable change because the Resonance is already set to the minimum value.

● CUTOFF [-64~63]—This filter parameter allows you to make the selected sound darker or brighter. Positive Cutoff settings mean that more overtones will be allowed to pass, so that the sound becomes brighter. The further this value is set in the negative direction, the fewer overtones will be allowed to pass and the sound will become softer (darker).

Characteristics of a low-pass filter
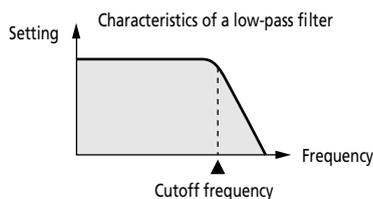
Note: For some sounds, positive (+) Cutoff settings will cause no noticeable change because the preprogrammed Cutoff parameter is already set to its maximum value.

(8) Press the EXIT button to return to the main page.

8. Using the mixer functions & effects

The MIXER environment does what its name suggests: it allows you to balance the various Keyboard parts of your E-60/E-50. See page 102 and following for how to "mix" the Song and Style parts.

About the E-60/E-50's effects

The E-60/E-50 contains the following effects processors, not all of which are available for all sections. Please carefully study the following table:

Section	Effects processors	Remarks
Keyboard Effects	Reverb, Chorus	Two editable processors (also shared by the Style and Song parts).
	MFX	Only for the Keyboard parts.
Style/Song Effects	Reverb, Chorus	Shared by these two sections as well as the Keyboard parts.

The reason why we are talking about "processors" is that most of them can be used in various ways (by selecting a "Type"). The MFX is the most versatile processor, because it can use one of 41 types, while the other processors provide 8 or 9 possibilities.

Mixing Keyboard parts

Here's how to set the balance and other mix-related parameters of the Keyboard parts.

(1) Press the $\boxed{\text{MIXER}}$ button.

The display changes to:
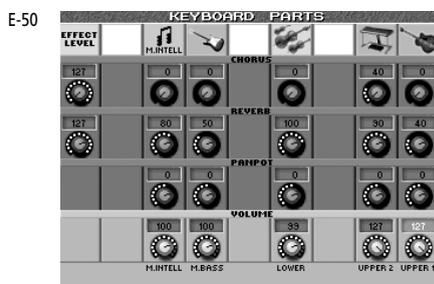
The **MUTE** message means that the part in question is currently not available. You can mute a part by pressing its instrument icon. To switch a muted part on, press its instrument icon (flagged with a MUTE message) again.

(2) **Press the knob icon of the parameter you want to set.**
Let's begin with the VOLUME row, which is displayed in light gray when you press one of the available knobs.

(3) **Use the $\boxed{\text{DATA/ENTRY}}$ dial or the $\boxed{\text{DEC}}$/$\boxed{\text{INC}}$ buttons to enter the desired value.**
You can also press the $\boxed{\text{DATA/ENTRY}}$ dial to call up a numeric pad and set the value (0~127) using the on-screen numeric buttons.

The D BEAM part (only available on the E-60) refers to the sounds that are generated when you use the D Beam controller after selecting the DJ GEAR, SOUND EFX or INSTRUMENT mode (scratches, sound effects, other "noises"). See page 52 for details.

(4) **After setting the levels, you can use the $\boxed{\text{BALANCE}}$ knob to establish the correct balance between the Keyboard parts and the Recorder/Arranger.**
"Mixing", as you may know, entails a lot more than just getting the balances right. It also involves specifying the stereo placement of sounds and the amount of effect that should be applied. So here we go...

(5) **Press the PANPOT knob of the keyboard part you wish to set.**
The display page still looks as shown in (2), except that the "PANPOT" row is now emphasized:

(6) **Use the $\boxed{\text{DATA/ENTRY}}$ dial or the $\boxed{\text{DEC}}$/$\boxed{\text{INC}}$ buttons to enter the desired value.**
"L63" corresponds to hard left, "0" to dead center and "R63" to hard right.

(7) **Press the REVERB knob of the Keyboard part whose send level you want to change.**

(8) Use the ⌈DATA/ENTRY⌉ dial, the ⌈DEC⌉/⌈INC⌉ buttons, or the on-screen numeric pad (press the ⌈DATA/ENTRY⌉ dial) to specify how much reverb should be applied to the selected Keyboard part.
The effect parameters themselves can be edited on an Effect page (see below).

The EFFECT LEVEL ⌈REVERB⌉ knob (far left) can be used to set the output level of the Reverb processor. Setting this parameter to "0" means that you no longer hear the effect in question. By contrast, setting the REVERB parameter of a Keyboard part to "0" means that only the part in question is no longer processed by the effect, while the remaining Keyboard parts are.

(9) Press the CHORUS knob of the Keyboard part whose send level you want to change.

(10) Use the ⌈DATA/ENTRY⌉ dial, the ⌈DEC⌉/⌈INC⌉ buttons, or the on-screen numeric pad (press the ⌈DATA/ENTRY⌉ dial) to specify how much chorus should be applied to the selected part.
The effect parameters themselves can be edited on an Effect page (see below).

EFFECT LEVEL ⌈CHORUS⌉ knob (far left) can be used to set the output level of the Chorus processor. Setting this parameter to "0" means that you no longer hear the effect in question. By contrast, setting the CHORUS control of a Keyboard part to "0" means that only the part in question is no longer processed by the effect.

Volume and status of the Style parts

After pressing the ⌈MIXER⌉ button twice, the following page appears:

(By pressing ⌈MIXER⌉ yet again, you jump to the "SONG MAKEUP TOOLS" page.)

• Start Arranger playback (don't forget to select the desired pattern), then press the ⌈SOLO⌉ field of the Style part you want to listen to in isolation.
Only one Style part can be soloed. Pressing another ⌈SOLO⌉ field causes the corresponding part to be played back in isolation. This setting cannot be saved: it is merely meant to help you find the part whose volume you want to change or that you want to switch off (see below).

Note: If the Solo function is on while you save a User Program, all tracks except the soloed one are swithed off, so that only the soloed track will be audible when you recall the User Program.

• Use the knob icons and the ⌈DATA/ENTRY⌉ dial, the ⌈DEC⌉/⌈INC⌉ buttons, or the on-screen numeric pad (press the ⌈DATA/ENTRY⌉ dial) to set the volume of the Style parts. See "Arranger parts" on p. 60 for a description of the Style parts.

• Use the ⌈ON/OFF⌉ fields to mute Style parts you do not need.
These settings can saved to a User Program (see p. 88).

• You can press the ⌈STYLE MAKEUP TOOLS⌉ field to jump to the MAKEUP TOOLS mixer. The parameters there provide more detailed Style mixing functions (see p. 102).

Editing the Keyboard effects processors

After setting the above parameters, you may find that even sensible reverb/chorus settings for the Keyboard parts do not yield the expected result.

In that case, you should edit the Reverb and Chorus parameters:

(1) Press the MENU button.
The display changes to:

(2) Press the EFFECTS field.
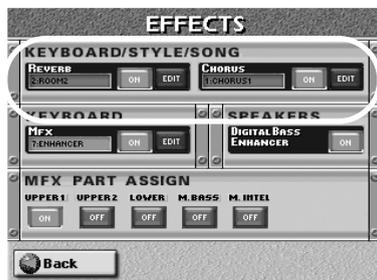
On this page, you can switch the REVERB and CHORUS processors on and off by pressing their OFF/ON button icons to the right of their "display".

If you need another reverb type, press the REVERB display and use the DATA/ENTRY dial or the DEC/INC buttons to select it. If you also need to change certain aspects of that effect...

Reverb for Keyboard parts

Be aware that any changes you make here also affect the Style and song parts. There are only one Reverb and one Chorus processor for all of the E-60/E-50's parts.

(1) Press the KEYBOARD REVERB EDIT field to access the Reverb parameters.
The display changes to:

(2) Press the ON (or OFF) field to switch the processor on (icon lights) or off (icon goes dark).
You can also do so on the EFFECTS page (see above).

(3) Press the field of the effect type you wish to use.
The options are:
- ROOM1, ROOM2, ROOM3—These types simulate the reverb characteristics of a room. The higher the number (1, 2 or 3), the bigger the "room" becomes.
- HALL1, HALL2—These types simulate the reverb of a small (1) or large (2) concert hall and thus sound much "bigger" than the Room types above.
- PLATE—Digital simulation of a metal plate that is sometimes used for creating reverb effects. Works well for percussive sounds.
- DELAY—A delay effect (no reverb). Works a lot like an echo effect and thus repeats the sounds.
- PAN DELAY—This is a stereo version of the above delay effect. It creates repetitions that alternate between the left and right channels.

REVERB LEVEL allows you to set the output level of the Reverb processor. Setting this parameter to "0" means that you no longer hear the effect in question.

(4) Press Back to return to the display page with the "modules".
—or—
Press the EXIT button to return to the main page.

Note: Do not forget to save your settings to a User Program if you want to keep them.

Chorus for Keyboard parts

Chorus broadens the spatial image of the sound and creates a stereo impression. You can choose from 8 types of Chorus.

(1) Press the MENU button.
The display changes to:

(2) Press the EFFECTS field.

On this page, you can switch the CHORUS processor on and off by pressing the OFF/ON button icon to the right of its "display".

If you only need another chorus type, press the CHORUS display and use the DATA/ENTRY dial or the DEC/INC buttons to select it. If you also need to change certain aspects of that effect...

(3) Press the KEYBOARD CHORUS EDIT field to access the Chorus parameters.
The display changes to:

(4) Press the ON (or OFF) field to switch the processor on (icon lights) or off (icon goes dark).
You can also do so on the EFFECTS page (see above).

(5) Press the field of the effect type you wish to use.
The options are:

● CHORUS1~CHORUS4—These are conventional Chorus effects that add spaciousness and depth to the sound.
● FEEDBACK—This is a chorus with a flanger-like effect and a soft sound.
● FLANGER—This is an effect that sounds somewhat like a jet airplane taking off and landing.

● SHORT DELAY—This is a delay (echo effect) with a short delay time.
● SHORT DLY FBK—This is a short delay with many repeats.

(6) Press Back to return to the display page with the "modules".
—or—
Press the EXIT button to return to the main page.

Note: Do not forget to save your settings to a User Program if you want to keep them.

Using the multi-effects processor (Multi-FX)

Your E-60/E-50 contains a multi-effects processor that can be used for processing any Keyboard part you like.

(1) Press the PART ON/OFF UP1 button (it must light).
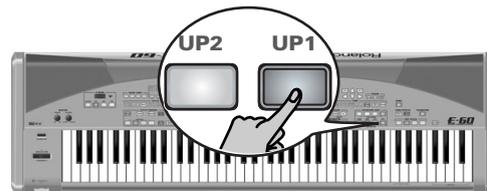
(2) Select the "Distort Gt1" sound on page 2 of the GUITAR/BASS family.

(3) Play a few notes on the keyboard and switch the MULTI-FX button on/off to hear the difference.
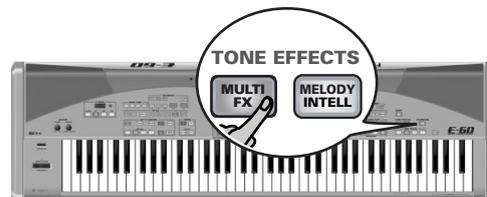
The MFX is available for all Keyboard parts.

(1) Press the MENU button.
The display changes to:

Roland

(2) Press the ⌊EFFECTS⌋ field.

EFFECTS

KEYBOARD/STYLE/SONG

Reverb
2:ROOM2   ON   EDIT

Chorus
1:CHORUS1   ON   EDIT

KEYBOARD

Mfx
7:ENHANCER   ON   EDIT

SPEAKERS

DIGITAL BASS
ENHANCER   ON

MFX PART ASSIGN

UPPER1   UPPER2   LOWER   M.BASS   M.INTEL
ON   OFF   OFF   OFF   OFF

Back

(3) Press the MFX PART ASSIGN field(s) of the Keyboard part(s) that should use the selected MFX effect.

Note: There is only one MFX processor that is shared by all Keyboard parts.

• Press the ⌊EXIT⌋ button to return to the main page.

Selecting another MFX type and editing it

The E-60/E-50 provides 41 different Multi-FX types, some of which are combinations of two effects for added flexibility. Here is how to select another Multi-FX type:

(1) Press and hold the ⌊MULTI-FX⌋ button until the display looks as follows:

MFX

MFX
9:ROTARY   ON   EDIT

REVERB SEND CHORUS SEND
0   0

9:ROTARY

HIGH SLOW RATE   LOW SLOW RATE   HIGH FAST RATE
2.00 Hz   2.00 Hz   8.00 Hz

LOW FAST RATE   SPEED   HIGH ACCELERATION
8.00 Hz   SLOW   10

LOW ACCELERATION HIGH LEVEL   LOW LEVEL
10   127   127

SEPARATION   LEVEL
127   127

Back   PAGE 1

You can also select this page by pressing the ⌊EFFECT⌋ button→⌊MFX⌋ field and the ⌊EDIT⌋ field. But the above method is a lot faster.

(2) Press the ⌊ON⌋ (or ⌊OFF⌋) field to switch the processor on (icon lights) or off (icon goes dark).
You can also do so on the EFFECTS page (see above).

(3) Press the field below "MFX" where the name of the currently selected type is displayed.

(4) Select the desired type with the ⌊DATA/ENTRY⌋ dial or the ⌊DEC⌋/⌊INC⌋ buttons.

Note: Multi-FX type selection can be linked to Tone selection for the Upper1 part. See page 85.

The available types are:

1. Thru	15. St. Chorus	29. OD→ Delay
2. Stereo EQ	16. St. Flanger	30. DST→ Chorus
3. Overdrive	17. Step Flanger	31. DST→ Flanger
4. Distortion	18. St. Delay	32. DST→ Delay
5. Phaser	19. Mod. Delay	33. EH→ Chorus
6. Spectrum	20. 3 Tap Delay	34. EH→ Flanger
7. Enhancer	21. 4 Tap Delay	35. EH→ Delay
8. Auto Wah	22. Time Delay	36. Chorus→ DLY
9. Rotary	23. 2 Pitch Shifter	37. Flanger→ DLY
10. Compressor	24. FBK Pitch	38. CHO→ Flanger
11. Limiter	25. Reverb	39. CHO/Delay
12. Hexa-Chorus	26. Gate Reverb	40. Flanger/DLY
13. Trem Chorus	27. OD→ Chorus	41. CHO/Flanger
14. Space-D	28. OD→ Flanger	

To avoid confusion, we decided to explain the available parameters elsewhere. See page 200. Here's how to edit the parameters:

(5) Press the field of the parameter you wish to change (the number of fields and their functions depend on the selected type).
If the required parameter is not displayed, press the PAGE fields to jump to another page. (Some effects have only one parameter page.)

(6) Set the desired value with the ⌊DATA/ENTRY⌋ dial or the ⌊DEC⌋/⌊INC⌋ buttons.

⌊REVERB SEND⌋ and ⌊CHORUS SEND⌋ (upper right corner) allow you to specify how strongly the multi-effect's output signal should be processed by the Reverb and/or Chorus processor. If that is unnecessary, set both parameters to "0".

(7) Press the ⌊EXIT⌋ button to return to the main page.

Linking Multi-FX type selection to the Upper1 part (Upper 1 M-FX Link)

If you like, the E-60/E-50 can automatically load the Multi-FX type that is suited for the Tone you assign to the UP1 part.

(1) Press the ⌊MENU⌋ button.

MENU

The display changes to:

MENU

TUNING   GUITAR MODE   V-LINK

SPLIT & TOUCH   EFFECTS   UTILITY

ARRANGER SETTING   STYLE COMPOSER   MIDI

FUNCTION   HAND CONTROLLERS   USB DATA STORAGE

TONE EDIT   FOOT CONTROLLERS   D BEAM

(2) Press the ⌊UTILITY⌋, then the ⌊GLOBAL⌋ field.

UTILITY

STARTUP   GLOBAL   FACTORY RESET   INFO

PLAYER   **FEEDBACK**   **KEYBOARD**

SONG PLAY QUICK START   FLASHING EXIT   UPPER1 MF-X LINK
FROM 1st NOTE   FLASHING METRONOME   FILL-IN ON USER PROGRAM CHNG

BWD/FWD/JUMP DATA UPDATE   STYLE MELODY INT LINK

SONG/ARRANGR START PRIORITY

Back

(3) Press the ⌊UPPER 1 M-FX LINK⌋ field to switch it on or off. If it is on, the E-60/E-50 selects a suitable MFX type for each sound you assign to the UP1 part.

(4) Press the ⌊EXIT⌋ button to return to the main page.

Effects for Songs and Styles

The Reverb and Chorus processors are shared by the Arranger, Recorder/16-track sequencer and the Keyboard parts.

Here is how to select different effects for the selected song or Style:

(1) Press the MENU button.

(2) Press the EFFECTS field.
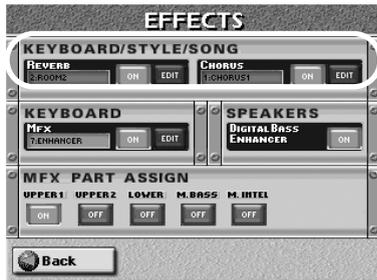
On this page, you can switch the REVERB and/or CHORUS processor off by pressing the OFF/ON button icon to the right of its "display".

If you need to select another effect type, press the REVERB or CHORUS display and use the DATA/ENTRY dial or the DEC/INC buttons to select it. If you also need to change certain aspects of that effect…

(3) Press the EDIT button icon next to the "REVERB" or "CHORUS" display.

Important remark

The effects settings discussed below are primarily intended for real-time changes of the selected Style or song. They are not saved (not even to a User Program). When you select a different Music Style or song, the changes made here are lost. You can, however, save them (thus "burning" them into the Style or song) by pressing the MAKEUP TOOLS button and the SAVE field on the page that appears then (see p. 108).

→ *Be aware that any changes you make here also affect the Keyboard parts. There are only one Reverb and one Chorus processor for all of the E-60/E-50's parts.*

Reverb for Style/Song parts

Press the field of the effect type you wish to use. The options are:

● ROOM1, ROOM2, ROOM3—These types simulate the reverb characteristics of a room. The higher the number (1, 2 or 3), the bigger the "room" becomes.

● HALL1, HALL2—These types simulate the reverb of a small (1) or large (2) concert hall and thus sound much "bigger" than the Room types above.

● PLATE—Digital simulation of a metal plate that is sometimes used for creating reverb effects. Works well for percussive sounds.

● DELAY—A delay effect (no reverb). Works a lot like an echo effect and thus repeats the sounds.

● PAN DELAY—This is a stereo version of the above delay effect. It creates repetitions that alternate between the left and right channels.

Press the REVERB LEVEL field and set the desired value with the DATA/ENTRY dial or the DEC/INC buttons.

This parameter specifies the output level of the Reverb processor. Setting this parameter to "0" means that your no longer hear the effect in question. By contrast, setting a REVERB parameter on the mixer page for Styles to "0" means that only the selected instrument is no longer processed by the effect, while the remaining instruments are.

Note: See "Mixing Song or Style parts" on p. 102 for details.

Press Back to return to the display page with the "modules".
—or—
Press the EXIT button to return to the main page.

Chorus for Style/Song parts

Chorus broadens the spatial image of the sound and creates a stereo impression. There are also other effect types you can choose here.

Press the field of the effect type you wish to use.

● CHORUS1~CHORUS4—These are conventional Chorus effects that add spaciousness and depth to the sound.

● FEEDBACK—This is a chorus with a flanger-like effect and a soft sound.

● FLANGER—This is an effect that sounds somewhat like a jet airplane taking off and landing.

● SHORT DELAY—This is a delay (echo effect) with a short delay time.

● SHORT DLY FBK—This is a short delay with many repeats.

Press the CHORUS LEVEL field and set the desired value with the DATA/ENTRY dial or the DEC/INC buttons.

This parameter specifies the output level of the Chorus processor. Setting it to "0" means that your no longer hear the effect in question. By contrast, set-

ting a CHORUS parameter on the mixer page for
Music Styles to "0" means that only the selected
instrument is no longer processed by the effect, while
the remaining instruments are.

Note: See "Mixing Song or Style parts" on p. 102 for details.

Press the CHO►REV SEND field and set the desired
value with the DATA/ENTRY dial or the DEC/INC
buttons.

This parameter sets the amount of chorus sound that
is sent to the Reverb processor. The value "127"
effectively allows you to connect the Chorus and
Reverb effects in series (Chorus before Reverb). If you
do not want the chorus signal to be processed by the
reverb effect, set this value to "0".

Press Back to return to the display page with the
"modules".

—or—

Press the EXIT button to return to the main page.

Digital Bass Enhancer function

If you like a powerful bass response, you can switch on
the E-60/E-50's "Digital Bass Enhancer" function. It
boosts the low frequencies, which you may appreciate
for pop and dance music.

(1) Press the MENU button.

(2) Press the EFFECTS field.
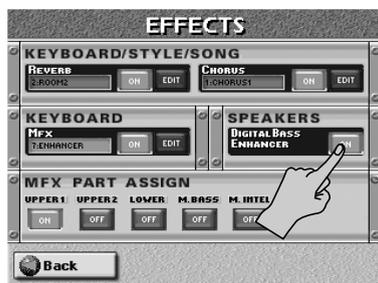
(3) Press the DIGITAL BASS ENHANCER ON button
icon.

The icon lights. Press it again to switch off the "Digi-
tal Bass Enhancer" function if you no longer need it.
This setting is memorized by the E-60/E-50. It cannot
be saved to a User Program.

(4) Press the EXIT button to return to the main page.

Note: You may hear some slight noise from the internal
speakers when the E-60/E-50 is turned on in a very quiet envi-
ronment while the Digital Bass Enhancer is set to "On". That
noise is too faint to be audible once you start playing. In any
case, it is not transmitted to external speakers or headphones.

Note: You may hear a clicking noise from the internal speak-
ers when you switch the Digital Bass Enhancer function from
"On" to "Off", or from "Off" to "On". This is not a malfunction.
This clicking noise is not transmitted to external speakers or
headphones.

9. Working with User Programs

The E-60/E-50 also provides User Program memories that allow you to store almost all settings (or registrations) you make on the front panel and the various display pages. Additional registrations can be loaded directly from the internal memory or a memory card.

Before taking a closer look at the User Programs, there is one thing we have to point out: all settings related to MIDI must be written to a MIDI Set (page 193). MIDI settings are not saved to a User Program.

Note: You can link a MIDI Set to each User Program, so that the User Program in question automatically loads the required MIDI settings.

About the User Program memory structure

Unlike previous Roland instruments, the E-60/E-50 no longer has a fixed area where it stores User Program settings, so that the number of User Programs is, in fact, unlimited. User Programs can reside in the internal memory or on a memory card. You can even load them individually using the User Program Finder.

To keep this massive amount of information manageable, the E-60/E-50 works with User Program Set Lists (hence the ⌊LIST⌋ button).

Such lists are what their name suggests: enumerations of User Program files stored in the same memory area as the list file itself.
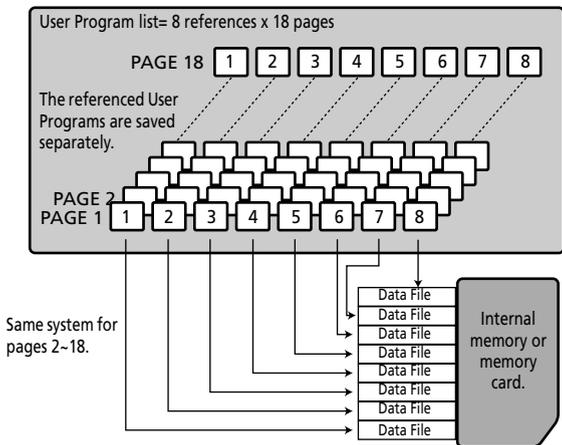
Set Lists are references to User Programs. They do not contain those registrations. The advantage of User Program Set Lists is that loading a completely different set of registrations takes less than a second (loading User Program Sets on an older Roland arranger instrument took much longer).

This allows you to prepare one set of User Programs for weddings, another for corporate events, a third for anniversaries, etc., that may access the same User Program data here and there. If you change a User Program (e.g. by selecting another sound for the LW part), that change is automatically adopted by all Set Lists that refer to that User Program.

Saving your settings to a User Program

It is a good idea to memorize your settings frequently, even if you still need to do some touching up afterwards.

Those intermediary saves allow you to return to the previous stage whenever you do not like your last modifications.

(1) Change all settings the way you want to save them.

(2) Press the USER PROGRAM ⌊LIST⌋ button.
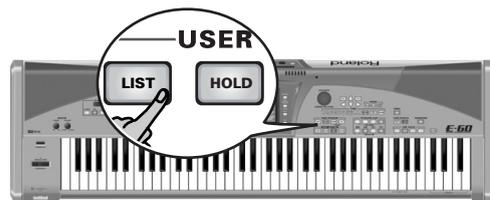
The display changes to:

(3) Press the ⌊WRITE⌋ field (it lights).

(4) Use the ⌊P⌋ fields and ⌊→⌋ to select the page (1~18) where you want to save your registration.

(5) Press a big field ⌊1⌋~⌊8⌋ to select the destination memory.

The display changes to:

The topmost field indicates the name of the User Program settings originally assigned to that memory (here "Rainbow"). If you do not want to overwrite that memory, press the CANCEL field and continue with step above (3) to select another memory.

(6) **Enter a name for your new User Program in the black field.**

At first, the black field contains the name of the settings you changed. If you don't want to use that name, start by pressing the Delete field.

See page 44 for how to enter names. You only need to do this the first time you save new settings to a User Program. You can also name your User Program at a later stage and then save it again.

Use a name that somehow summarizes the purpose of this User Program. The name of the song you will use these settings for is probably the most explicit name you can think of.

It is perfectly possible to program several User Programs for one song. Selecting a User Program is a lot faster than calling up one of the E-60/E-50's functions, modifying the settings, etc., while playing. You could program one User Program for the first part of a song, another one for the bridge and a third one for the closing section. Doing so allows you to "play" with the effect settings of the various processors, for example.

(7) **Press the EXECUTE field.**

Important note

User Programs are saved on the media that also contains the list file you are currently using. The name of that list is displayed in the upper left corner, next to a folder icon. The area where your Set List is stored appears in the right corner.

You cannot select a different Set List here.

If the target memory area (which cannot be chosen here) already contains a User Program of that name, you are asked whether it is OK to overwrite it.

• Press the YES field to overwrite the file. This replaces the User Program in question with the new version. Be aware that the new version is used by any list that contains a reference to that file.

• Press the NO field to return to the WRITE USER PROGRAM page, change the name, then press EXECUTE again.

Note: See "Load User Program Set" on p. 176 for how to load another User Program List.

The data are saved and a message confirms the end of the operation.

Selecting User Programs

Cancel

For song or Style playback without any customized settings or whenever you want to start anew, you should select the "Cancel" setting. This allows you to leave User Program mode (canceling the settings of the last User Program you may have loaded).

These settings can be recalled any time, i.e. even after selecting a "regular" User Program.

Simultaneously press USER PROGRAM DOWN and UP.
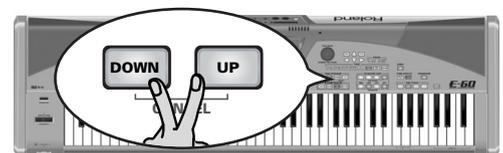
Note: Unless you specified a User Program for the Startup function (page 95), you can also load the Cancel settings by powering off your E-60/E-50 and turning it back on again.

Choosing User Programs manually

The procedure for selecting User Programs does not follow the usual routine for selecting Styles or sounds. So please carefully read the following.

(1) Press the USER PROGR field on the main page.
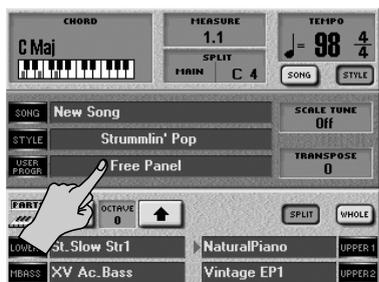
Note: If the currently displayed User Program was loaded with the User Program Finder, the E-60/E-50 now displays the USER PROGRAM FINDER page where you can select another registration in the internal memory or on a card. To work with User Programs of the currently active Set List, proceed as follows.

Press the USER PROGRAM LIST button.
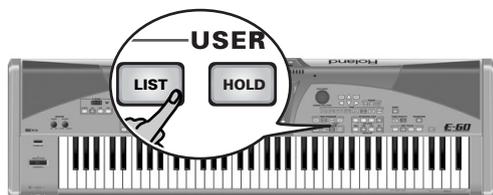
The display changes to:

(2) Use the P fields and ➡ to select the page (1~18) of the required registration.

(3) Press a big field 1~8 to select the memory.
—or—
Press the DATA/ENTRY dial and enter the number using the on-screen numeric pad.
Each User Program also has a fixed number (right edge of its field) that allows you to select it directly.

Sometimes, an **asterisk** (*) is displayed. This happens when you change a parameter setting after recalling a User Program to alert you to the fact that the current settings no longer correspond to the ones you recalled. If you like them better than the original settings, you must save them again. See page 88.

Note: By pressing the field of the memory with the asterisk once again, you restore the original settings of that memory (thus cancelling any changes you have made).

Selecting User Programs with DOWN UP

The following method is especially useful if you programmed two or more User Programs for a song or if the User Program sequence corresponds exactly to the song sequence you are about to play (i.e. settings of the first song or song part in memory 1 on page "1", settings of the second song or song part in 2 on page "1", etc.).

With DOWN or UP, you always select the preceding or next User Program.
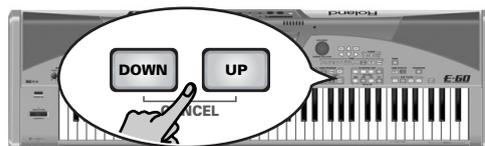
UP Selects the following User Program (for example 8/P1 if you selected E-60/P1 before pressing this button).

DOWN Selects the preceding User Program (for example 6/P1 if you selected E-60/P1 before pressing this button).

Note: If you press UP after selecting 8/P18, the E-60/E-50 will call up 1/P1. Likewise, if you press DOWN after selecting 1/P1, your E-60/E-50 will select 8/P18, and so on.

Note: User Programs can also be selected using an optional footswitch connected to the FOOTSWITCH/EXPRESSION socket on the rear panel. See "User Prg Up, User Prg Down" on p. 56.

Working with the User Program Finder

Your E-60/E-50 also allows you to load any User Program from the internal memory or a memory card, which is as fast as working with a User Program Set List. As stated above, any registration you "write" is saved as a separate User Program file in the memory area that contains the currently active Set List.

There may be times when somebody from the audience asks you to play a given song, for which you did prepare a User Program – but maybe in a completely different Set List. Rather than loading another list, you can simply use the Finder to load just that specific User Program.

If necessary, a User Program loaded with the Finder can be assigned to the currently active Set List using WRITE. The Finder can therefore also be used for creating "best of" compilations from various User Program Set Lists.

(1) Press the FINDER USER PRG button.
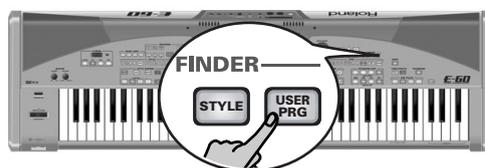
The display changes to:

(2) Specify which memory area contains the User Program you need: EXTERNAL MEMORY, INTERNAL MEMORY or FLOPPY.
The display shows a list of 5 User Programs of the selected device (internal memory, card or floppy disk).
Note: The E-60/E-50 does not support User Programs of the old Roland E and KR series.

(3) Press the field of the User Program you need.
If the name is not displayed, use PAGE ← → to go to a different page, then press the field of the settings you are interested in.
This page lists the names of all individual User Programs contained on the selected media.

Quick location of the User Program you need
There are several ways of quickly locating the User Program you are after:

■Sorting files
Press a field to sort the User Program files:

USER PRG: The files are sorted alphabetically according to User Program name.

STYLE LINK: The files are sorted alphabetically according to Style name (all User Programs refer to a Style).

GENRE: The files are sorted alphabetically according to genre (kind of music).

SONG LINK: User Program files with an active link to a song file are sorted alphabetically according to song name.

The right column now contains the selected entry (only one of them can be displayed along with the User Program name).

Continue with step (3) to select the User Program you want to use.

■Using the Index function
The highest hierarchical level of the User Program Finder database is called "Index". All search operations apply to the selected Index (and therefore not necessarily to all files in the internal memory or on a memory card).

• After performing step (2), press the INDEX field in the upper left corner.

• Either press the field that corresponds to the desired User Program category or –if you're not sure which category the User Program belongs to– press ALL.
• Now return to the previous page by pressing Back. The display returns to the page shown under step (1) above. This time, however, only the User Programs belonging to the selected Index are displayed.
Continue with step (3) to select the User Program you want to use.

■To directly locate the desired User Program…
(4) Press the FINDER field.

(5) Decide what you want to look for by pressing the USER PRG, STYLE LINK, GENRE or SONG LINK button icon.
(6) Decide how the Finder should look for files:
• Press the ALPHABETIC ORDER field to search for all entries that start with the characters you entered ("BEA", for example). Names that match the specified criteria will be displayed at the top of the list.
• Press the Search Only field to have the E-60/E-50 search for names that contain the supplied information. (This would allow you to also locate a file called "Raggabeat" if you entered "BEA".)

(7) Enter only as many characters as you think are necessary to find the User Program you are after.
The character string you enter can be used in two ways (see below).
• See page 44 for how to enter names.
Note: There's no A/a field here, because the Finder makes no distinction between upper- and lower-case letters.

• To enter numbers without cycling through the characters first, press the NUM LOCK button icon. After entering the numbers, switch it off if you need to enter characters again.

(8) Press the FIND field to start your search.

(9) Press the field of the User Program you need and start playing.

Note: If no User Programs were found, the following message appears and no file names are displayed (in which case you need to press the USER PRG, STYLE LINK, GENRE or SONG LINK field to display all User Programs again):

If the E-60/E-50 did find one or several matches, the "FOUND" number will be smaller than the "GLOBAL" number.

Note: See also "Editing User Program Finder information" on p. 95 for how to make the Finder functionality even more powerful.

Selectively loading User Program settings (User Program Hold)

Your E-60/E-50 allows you to filter certain User Program settings when new User Programs are loaded.

(1) If you need a different User Program (whose settings should be used), first select it.

(2) Press the LIST button and the HOLD SETTINGS field.

—or—

Press and hold the HOLD button.

The display changes to:

(3) Press the fields of the settings you do *not* want to recall.

● **Style**—Press this field if the settings related to the Arranger (Style and Division) should be ignored.

● **Song**—Press this field if the song (see "Song Link" on page 93) should no longer be loaded.

● **MIDI Set**—Press this field if the linked MIDI Set (page 94) should not be recalled. The current MIDI channels, filter settings, etc. (page 187), therefore remain as they are.

● **Tempo**—Press this field if the tempo setting contained in every User Program should be ignored.

● **Tone**—Press this field to ignore sound selection for the Keyboard parts when a different User Program is recalled.

● **Transpose**—Press this field to ignore the Transpose (value and mode) contained in every User Program.

● **KBD Mode**—Press this field to ignore the Keyboard Mode (Whole/Split) and Arranger Chord settings (Standard/Piano Style, Left/Right, etc.).

● **Bass Inversion**—Press this field to ignore the setting of the BASS INVERS button.

Press ALL to activate all button icons and NONE to switch them all off.

Pressing one of the above fields without selecting a User Program afterwards has no effect. Only when you select another User Program will the selected data filter start working.

(4) Press the EXIT button to return to the main page.

(5) Use the USER PROGRAM HOLD button to decide whether the filters you selected should be used (button lights) or not (button dark).

Bypassing the AUTO FILL function (Fill In On User Program Change)

User Programs also contain the "address" of the Style division (pattern) to be used when you recall those registrations. By selecting a User Program, you may therefore switch from the VARIATION 1 pattern (which you selected by hand) to VARIATION 3 (stored in the new User Program), for example.

If the AUTO FILL IN button lights, any "automated" changes to another Style pattern are usually preceded by a fill-in phrase (see the right illustration):
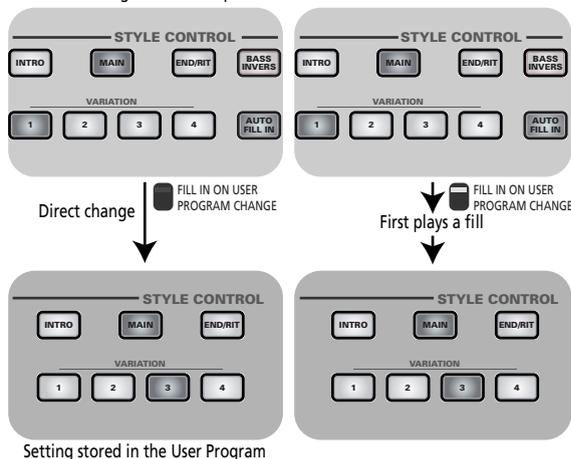
If AUTO FILL IN doesn't light, the change to VARIATION 3 occurs as soon as you select the User Program in question.

Given that it is fairly easy to forget about the
AUTO FILL IN button while playing, the E-60/E-50
allows you to specify that the Arranger should never
play a fill-in when a switch to a different Style pattern
is triggered by User Programs you select.

(1) Press the MENU button.
The display changes to:

(2) Press the UTILITY field, followed by the GLOBAL
field.

(3) Press the FILL IN ON USER PROGRAM CHANGE
field to switch this function on or off.

FILL IN ON... lights	If the AUTO FILL IN button lights, a fill-in is played when you recall a User Program that selects a Style pattern, which is different from the one.
FILL IN ON... dark	No fill-in is played when you recall a User Program that selets a different pattern, even if the AUTO FILL IN button lights.

This setting has no effect on situations where the
AUTO FILL IN button doesn't light (in which case no
fill-in is played).

(4) Press the Back field to return to the menu or the
EXIT button to return to the main page.

Automatic functions for User Programs

Song Link

This function means that, by recalling a User Program,
you also prepare the associated song. Such a song must
be available when you load the User Program in ques-
tion for this system to work. All you need to do, then, is
hit the PLAY/STOP ►/■ button to start playback of
that song.

Your E-60/E-50 only memorizes the song name. If, at
the time you recall such a User Program, that song is
not available, the display will respond with:

Remove the memory card (because the internal mem-
ory is always available), insert the proper card and
select that User Program again. If you don't, the E-60/
E-50 will start playback of the previously loaded song
when you press PLAY/STOP ►/■ again.

(1) Press the USER PROGRAM LIST button.
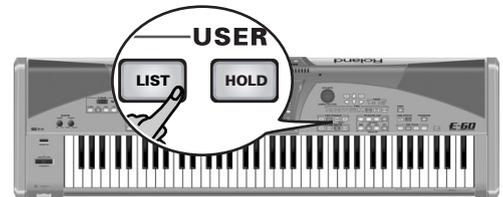
The display changes to:

(2) Press the SONG LINK field.

If the User Program already contains a link to another song, which you no longer need, press the DELETE SONG LINK field. This is not necessary to establish a new link – it is meant to cancel an existing link.

(3) Press MAKE NEW SONG LINK.
The display changes to:

Note: Songs that also contain lyrics information are flagged by means of an "[LY]" icon. The note (♪) means that the file in question also contains Play & Search information.

See "Locating files with the Song Finder" on p. 110.

(4) Press the field of the song you want to link to the currently selected User Program.

(5) Press the GET IT field to establish the link to the song whose name appears.
This takes you back to the "User Program" page. The selection field now contains a small "SONG" message. On the main page, User Programs with a link to a song are indicated by means of a paper clip icon.

Linking a MIDI Set to a User Program

MIDI Sets are "User Programs for MIDI parameters". There are eight such memories (page 193).

If you regularly use the E-60/E-50 in different MIDI environments (studio, live, band), preparing three MIDI Sets and linking them to the User Programs you usually use in the studio, on stage, etc., can be a time saver. In other situations, such a link could be **dangerous**, because it would reconfigure the E-60/E-50's MIDI parameters without you actually knowing it.

(1) Press the USER PROGRAM LIST button.
The display changes to:

(2) Press the MIDI LINK field.

(3) Press a MIDI Set 1~8 field to select the desired MIDI Set.
To break the link to this MIDI Set, press its field again (all indicator icons must be dark).

(4) Press Back to return to the User Program selection page or the EXIT button to return to the main page.
The selection field on the "USER PROGRAM SET LIST" page now contains a small "MIDI" message. On the main page, User Programs with a link to a MIDI Set are indicated by means of a MIDI socket icon.

User Program Recall

When you switch on the E-60/E-50, it automatically selects the "Cancel" mode, i.e. no User Program (page 89). But maybe you prefer to be operational right away. In that case, tell the E-60/E-50 which User Program it should recall whenever you switch it on:

(1) Press the MENU button.
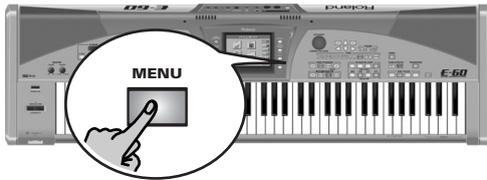
The display changes to:

(2) Press the UTILITY field, followed by the STARTUP field.

(3) Press the USER PROGRAM field and use the DATA/ENTRY dial to select the User Program to be recalled when the E-60/E-50 is switched on.

(4) Switch on the RECALL field.
Switch off this button icon if no User Program should be recalled when the E-60/E-50 is switched on.

If the User Program contains a song and/or MIDI link, the paper clip and/or MIDI socket icon are displayed.

(5) Press the EXIT button to return to the main page.

Editing User Program Finder information

The User Program Finder is used for quickly locating the User Programs you need in a given situation. Some information is added automatically to User Programs you save, while other information needs to be supplied by hand.

Here, we will concentrate on how to prepare that information for real-life use.

(1) Press the FINDER USER PRG button.
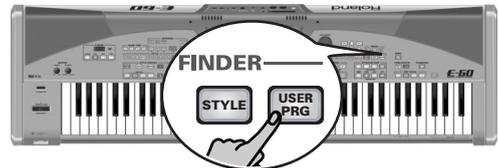
The display changes to:

(2) Specify the memory area that contains the User Program whose information you want to change or expand: EXTERNAL MEMORY, INTERNAL MEMORY or FLOPPY.
The display shows a list of 5 User Programs in the selected memory area.

The USER PRG, STYLE LINK, GENRE and SONG LINK fields allow you to sort User Programs in alphabetical order.

(3) If the name of the User Program you want to use to is already displayed, press its line.

(4) To display the next 5 User Programs, press the ➡ field in the lower right corner.
You can press this field as many times as necessary (until it is no longer displayed). You also use the DATA/ENTRY dial and the DEC/INC buttons.

To return to a previous group of 5 user Programs, press ◀. See page 90 for details about locating the desired User Program.

Editing the User Program Finder information

The Finder information is based on search criteria that need to be added to User Program files.

User Program Options

The $\boxed{\text{OPTIONS}}$ field in the lower left corner provides access to a display page where you can add database information. This also works for User Program files that already contain entries you wish to modify.

(1) First select the User Program whose database information you wish to change or edit by pressing its field.

(2) Press the $\boxed{\text{OPTIONS}}$ field.

(3) Now do one of the following:

■**Rename**

This function allows you to change (or supply) the USER PRG and GENRE information of the selected User Program. (STYLE LINK and SONG LINK cannot be edited in this way. See page 94 for how to do that.)

Note: In the case of a floppy disk, you can only change the "USER PRG" entry.

• Press the $\boxed{\text{USER PRG}}$ or $\boxed{\text{GENRE}}$ field and enter the desired characters.

• The $\boxed{\text{A/a}}$ field allows you to switch between uppercase and lowercase characters.

What happens when you execute?

Before performing the next step, we'd like to inform you about the possible consequences of renaming a User Program (USER PRG). From the illustration on page 88, you may remember that each User Program is, in fact, a separate file.

You can bundle 144 such files into a User Program Set List whose "members" can be recalled via the display (or using the USER PROGRAM $\boxed{\text{DOWN}}$/$\boxed{\text{UP}}$ buttons on the front panel). When you select a memory $\boxed{1}$~$\boxed{8}$ on pages P1~18, the E-60/E-50 therefore loads the settings of the file in question. So here's what may happen:

• If you rename a User Program that is referenced by the currently active Set List, the Set List is updated (and therefore finds the User Program despite its new name).

• If you rename a User Program that is referenced by other Set Lists (which you didn't load), those lists no longer find the User Program you renamed. Consequently, when you select the memory in question (after loading the Set List), nothing happens, because that reference no longer works.

• Renaming a User Program that doubles as Music Assistant entry (and therefore has a "MA" label, see below) also affects the Music Assistant registration's name (which changes accordingly).

• Press the $\boxed{\text{EXECUTE}}$ field.

■**Delete**

This function allows you to delete the selected User Program from the internal memory area or memory card. You should use this as sparsely as possible.

• Press the $\boxed{\text{DELETE}}$ field. Deleting a User Program cannot be undone, which is why the following question is now displayed:
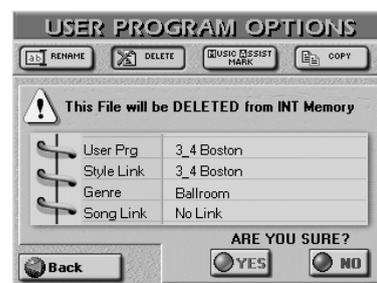
$\boxed{\text{YES}}$ deletes the User Program file.

$\boxed{\text{NO}}$ leaves the file intact and takes you back to the initial User Program Finder page with the list.

$\boxed{\text{Back}}$ leaves the file intact and takes you back to the USER PROGRAM LIST page.

Note: If a User Program you delete here is assigned to a Set List, the memory in question no longer works.

Note: Deleting a User Program that doubles as Music Assistant registration also discards the Music Assistant entry. For safety reasons, an error message is displayed in that case.

■**Music Assistant Mark**

Note: This function is not available for User Programs that reside on floppy disk or on a memory card.

This option allows you to add an "MA" label to the selected User Program, which means that its registration settings appear in the Music Assistant list (see p. 33).

• If necessary, copy the User Program to the internal memory.

• Press the $\boxed{\text{MUSIC ASSIST MARK}}$ field.

Use the familiar Finder functions to locate the User Programs you want to appear in the Music Assistant list, then press their fields to add (and again to remove) the "MA" label.

Music Assistant registrations are, in fact, a virtual concept, because they only exist if there is a User Program file they can refer to. That explains why deleting a User Program file (see above) also discards the associated Music Assistant entry.

■Copy

This function allows you to copy the selected User Program to another memory area. Be sure to select a User Program before pressing the [OPTIONS] field on the USER PROGRAM LIST page. Bear in mind that the COPY page only lists User Programs that match the last search criteria you used for the USER PROGRAM FINDER.

On the other hand, if you only need to copy certain User Programs on memory card or in the internal memory, using the FINDER is actually a good idea: it helps you to avoid too many presses of the PAGE [←] or [→] field.

• On the USER PROGRAM OPTIONS page, press the [COPY] field.

• Start by specifying the source that contains the User Program(s) you wish to copy: Press the [FROM] button icon to select the memory area.

INT MEMORY: The E-60/E-50's internal memory.

EXT MEMORY: The memory card in the E-60/E-50's PCM-CIA slot. Do not forget to insert it before selecting this option.

FLOPPY: The floppy disk in the E-60/E-50's drive.

• Now specify the target you wish to copy the selected User Program(s) to: Press the [TO] button icon to select the memory area.

• If the name of the User Program you want to copy is already displayed, press its line.
You can also select several User Programs.

To display the next 5 files, press the [→] field in the lower right corner. You also use the [DATA/ENTRY] dial and the [DEC]/[INC] buttons.

To return to a previous group of 5 User Programs, press [←].

If you need to copy all User Programs that are currently displayed (on all available pages), press the [ALL FILES] field.

Note: If the memory card or floppy disk is not formatted, a message will be displayed that allows you to format it before the User Programs are copied.

(4) If you chose "EXT MEMORY" or "FLOPPY DISK" for "TO", disable the card's/disk's write protection and insert it into the PCMCIA slot or disk drive.
See the owner's manual of the memory card for how to disable its write protection.
Note: Not all cards have a write protection function.

(5) Press the [EXECUTE] field. (Press [Back] if you do not want to proceed or to select other files.)
You are asked whether it is OK to overwrite all files on the destination media ("TO") that have the same file names as the files you are about to copy.

(6) Press the [YES] field if it is OK to overwrite files with the same names on the destination media. Press the [NO] field if files on the source ("FROM") media that have the same name as existing files on the destination ("TO") media should not be copied (only files with "original" names will be copied in that case).

The data are copied and a "Function Complete" message confirms the end of the operation.

(7) Press the [EXIT] button to return to the main page.

Editing an Index

All User Programs in the E-60/E-50's internal memory are already assigned to one of eight categories. You can change those assignments and even edit the Index names. Furthermore, you can copy an Index entry (along with all its User Program assignments) to a different entry.

(1) Press the FINDER [USER PRG] button.

The display changes to:

(2) Specify the memory area: EXTERNAL MEMORY or INTERNAL MEMORY.

(3) Press the INDEX field in the top left corner.
If the ALL field is currently selected, the display looks as follows:

USER PROGRAM INDEX

CATEGORY RENAME EDIT COPY

ALL | Celebration | Latin
| Old & Gold | Regional
| Top 40 | Background
| Dance | My Favorite

Back

The Index Edit functions are only available for "real" Index categories, so...

(4) Press the field of the Index category you wish to edit.

USER PROGRAM INDEX

CATEGORY RENAME EDIT COPY

ALL | Celebration | Latin
| Old & Gold | Regional
| Top 40 | Background
| Dance | My Favorite

Back

(5) Select the edit function you need by pressing its field.

■ Rename

This function allows you to change the name of the selected Index.

• Press the RENAME field.

USER PROGRAM INDEX

CATEGORY RENAME EDIT COPY

My Favorite | ?!%#1 | abc 2 | def 3
← | → | ghi 4 | jkl 5 | mno 6
| pqrs 7 | tuv 8 | wxyz 9
A/a | Delete | Space 0 | Insert

Back EXECUTE

• Enter the new name (16 characters). See "Entering names" on p. 44.
Note: The A/a field allows you to switch between uppercase and lowercase characters.

• Press the EXECUTE field to confirm the new name.

■ Edit

This function allows you to assign the desired User Programs to the selected Index (or to remove existing User Program assignments).

• After performing step (4) above, press the EDIT field.

USER PROGRAM INDEX

CATEGORY RENAME EDIT COPY

USER PRG STYLE LINK GENRE SONG LINK

3_4 Boston | Ballroom
60's Rock'N | Rock'n
66 Jahre | M4 | Blues
6_8 Ballad | Ballad
6_8 Pop | Pop

Back FINDER FOUND 704 GLOBAL 704 ← PAGE 1 →

• Use the FINDER, USER PRG, STYLE LINK, GENRE and SONG LINK fields to locate the desired file. See page 90.

• Press the fields of all User Programs you wish to assign to the selected Index category.
Selected User Programs are displayed on a light background.
To remove a User Program from the selected category, press its field, so that it turns dark.

• If necessary, use the PAGE ←→ fields to go to previous or subsequent list pages.

• Press Back to confirm your changes and return to the USER PROGRAM LIST page. Press EXIT to return to the main page and to cancel your changes (which means that the assignments you have just changed will be lost).
Note: After 50 modifications (established/defeated assignments), the E-60/E-50 performs an automatic confirmation (like when you press the Back field).

■ Index Copy

This function allows you to copy one Index category (along with all its User Program assignments) to a another category. You could take advantage of this for merging two categories to free up one category for new assignments.
Note: There are eight Index categories in all. You cannot create additional categories.

• After performing step (4) above, press the COPY field.

USER PROGRAM INDEX

CATEGORY RENAME EDIT COPY

Celebration | | Celebration
Old & Gold | | Old & Gold
Top 40 | ▲ | Top 40 | ▲
Dance | | Dance
Latin | ▼ | Latin | ▼
Regional | | Regional
Background | | Background
My Favorite | | My Favorite

Back REPLACE MERGE

• In the left column (SOURCE), press the field whose assignments you wish to copy to another Index category. You can also use the ▲▼ fields.

• In the right column (DESTINATION), press the field of the index category you wish to copy the assignments to. You can also use the ▲▼ fields.

• Now specify how the User Program assignments should be copied:

Press the REPLACE field if the assignments of the DESTINATION Index should be erased and replaced by the entries of the selected SOURCE field.

Press MERGE if the User Program assignments of the SOURCE category should be added to the assignments of the DESTINATION Index (the DESTINATION category will contain more assignments than before).

Your command is briefly confirmed by the display.

Note: No User Program files are copied during this operation.

(6) Press the Back field to return to the USER PRO-GRAM LIST page.

Note: Press the EXIT button to return to the main page and cancel your changes.

Music Assistant functions

The Music Assistant environment provides several functions for editing existing and creating new registrations.

Creating new Music Assistant registrations

Music Assistant registrations are always based on a User Program. They are only references to data that reside elsewhere.

(1) Press the FINDER USER PRG button.
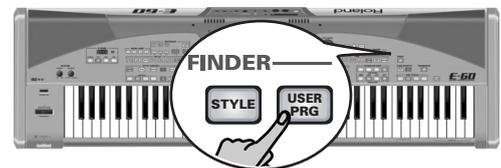
The display changes to:

(2) Select the internal memory by pressing INTERNAL MEMORY.

Music Assistant registrations must reside in the E-60/E-50's internal memory. If necessary, first copy User Programs from a memory card to the E-60/E-50's internal memory (see p. 97).

(3) Press the OPTIONS field, followed by MUSIC ASSISTANT MARK.

(4) Use the Finder functions to locate the desired User Program (see p. 90).

(5) Press the field of a User Program that should appear in the MUSIC ASSISTANT window.

It is flagged with an "MA" symbol. If you pressed the wrong field, just press it again to remove the "MA" symbol.

(6) If necessary, select additional User Programs.

(7) Press the EXIT button to return to the main page.

Editing Music Assistant registrations

The E-60/E-50 also allows you to edit certain aspects of existing Music Assistant registrations.

(1) Press the ⸢MUSIC ASSISTANT⸥ button.

The display now looks as follows:

(2) Select the Music Assistant entry you want to edit.

(3) Continue with "Renaming Music Assistant registrations" or "Deleting Music Assistant entries".

■Renaming Music Assistant registrations

• Press the ⸢OPTIONS⸥ field, followed by the ⸢RENAME⸥ field if it does not yet "light".

This function allows you to change (or supply) the NAME, ARTIST and GENRE information for the selected Music Assistant registration. "ARTIST" refers to the person that made the song famous, while "GENRE" describes the kind of music.

• Press the ⸢NAME⸥, ⸢ARTIST⸥ or ⸢GENRE⸥ field and enter the desired characters.
See "Entering names" on p. 44. The ⸢A/a⸥ field allows you to switch between uppercase and lowercase characters.

The NAME you enter here only refers to the Music Assistant entry and has no effect on the underlying User Program whose name does not change.

• Press the ⸢EXECUTE⸥ field to confirm the new name.

■Deleting Music Assistant entries

The DELETE function allows you to dispose of the selected Music Assistant registration. Again, this is a virtual process, because the underlying User Program does not disappear. (In fact, this operation only strips the "MA" icon from the related User Program.)

• Select the Music Assistant entry you want to discard.

• Press the ⸢DELETE⸥ field. This operation cannot be undone, which is why the following question is now displayed:

⸢YES⸥ deletes the Music Assistant entry.

⸢NO⸥ leaves the entry intact and takes you back to the list page.

⸢Back⸥ leaves the file intact and takes you back to the MUSIC ASSISTANT LIST page.

Saving a Music Assistant entry

The SAVE function on the MUSIC ASSISTANT LIST page does two things at once:

• It gathers the settings of all parameters that make up the E-60/E-50's current registration and saves them.

• It creates a new User Program and gives it the same name, or modifies the existing User Program to which the Music Assistant entry is referring. (This depends on the name you enter.)

Even though the display page is very similar to the RENAME page (see above), it thus serves an altogether different purpose.

This is useful for the following: suppose you started out with a Music Assistant registration and then switched on the UP2 part, changed the mixer settings and selected a different Music Style. If you like the new version better, you probably want to update the old version. Hence the SAVE function.

(1) On the MUSIC ASSISTANT LIST page, press the ⸢SAVE⸥ field.

(2) Press the ⸢NAME⸥, ⸢ARTIST⸥ or ⸢GENRE⸥ field and enter the desired characters.

See "Entering names" on p. 44. The A/a field allows you to switch between uppercase and lowercase characters.

(3) **Enter names for the remaining entries, if you like.**

(4) **Press the EXECUTE field to save the settings.**
If you are saving your Music Assistant registration under a new name, the operation is confirmed and the E-60/E-50 returns to the MUSIC ASSISTANT LIST page. (A new User Program is created along with your Music Assistant registration.)

If the Music Assistant database already contains a registration of the name displayed for NAME, the following warning appears:

YES means that *both* the original Music Assistant registration *and* the underlying User Program are overwritten and replaced with the new versions.

NO leaves the entry intact and takes you back to the SAVE page where you can enter a different name. Continue with step (2) above.

(5) **Press the EXIT button to return to the main page.**

10. Song and Style Makeup Tools

Mixing Song or Style parts

Though accessible via the [MIXER] *button (press it twice or three times), the Style and Song mixers are in fact part of the MAKEUP TOOLS functions. In this entire chapter, we never refer to tracks or parts – only instruments. The parameters discussed below are indeed related to individual sounds (some tracks may use two or more sounds): if you think "the bass" is too loud, turn it down. If "the piano" needs more reverb, just add it... It doesn't get any easier than that.*

Important remark

The parameters discussed in this section are primarily intended for real-time changes to a Style or song. They are not saved. When you select a different Style or song, the changes made here are lost. You can, however, save them (thus "burning" them into the Style or song) by pressing the [MAKEUP TOOLS] button and the [SAVE] field on the page that appears then (see p. 108).

(1) Press the [MIXER] button twice or three times.

The display changes to...

...or:

To mix the Style parts, you need to press the [STYLE MAKEUP TOOLS] field on the "USER PRO-GRAM STYLE VOLUME" page.

(The difference between these two pages is that the "USER PROGRAM..." settings can be saved to a User Program, and are therefore "temporary" modifications of the Style data, while the "STYLE MAKEUP TOOLS" settings can be "burned" into the Style itself.)

(2) If the icon of the instrument whose settings you want to change is not displayed, press the PAGE ◄ or ► field to go to the previous or next page.
The number of mixer pages depends on the number of sounds being used in the selected song or Style. In certain cases, there may be only one page (with fewer than nine channel strips).

(3) Press the row that corresponds to the setting you want to change (CHORUS, REVERB, PANPOT, VOLUME).
The row of the selected parameter is displayed on a light background.

(4) use the [DATA/ENTRY] dial or the [DEC]/[INC] buttons to set the parameter value.

The available parameters are relative changes that are added to or subtracted from the settings stored in the song or Style. The parameters you can set on this page are:

■**Instrument on/off (MUTE)**
Press the instrument icon at the top of the channel strip to switch the corresponding instrument on (no MUTE message) or off (a MUTE message appears).

■**REVERB and CHORUS: effect balance**
The CHORUS and REVERB parameters allow you to specify how strongly the instruments should be processed by the Reverb and/or Chorus processors. The effects parameters (kind of reverb and chorus, etc.) can be set on the COMMON (see p. 107) and STYLE/ SONG REVERB & CHORUS pages (see p. 86).

■**PANPOT: stereo placement**
Allows you to change the stereo placement of the instrument you are using.

■**VOLUME**

Allows you to set the volume of the corresponding instrument.

Note: Please bear in mind that these changes apply to the instruments (Tones/Drum Set) in question – not to the entire track they belong to.

(5) Press the $\boxed{\text{EXIT}}$ button to return to the main page.

Using the Makeup Tools

In addition to the Cover functions for songs and Styles (see pages 38 and 63) that allow you to change song or Style playback by selecting presets, the E-60/E-50 also boasts a mode where you can customize playback of the currently selected song or Style. Changes you perform here must be saved if you want them to be permanent.

Important remark

The MAKEUP TOOLS settings are ignored by the E-60/E-50's 16-track Sequencer or Style Composer, unless you "burn" those settings into your song or Style (see "Before saving your settings" on page 107).

Before you begin…

There are two sets of MAKEUP functions: one for songs (Standard MIDI Files) and another for Styles. Because of the striking similarities, we will discuss each item only once and only point out aspects that behave differently.

Both environments can be selected via the same button on the front panel, which is why we recommend you always look at the information in the top line of the display ("SONG MAKEUP TOOLS" or "STYLE MAKEUP TOOLS") before making any change whatsoever.

■**Before changing the MAKEUP TOOLS settings of a song**

• Press the FINDER $\boxed{\text{SONG}}$ button.
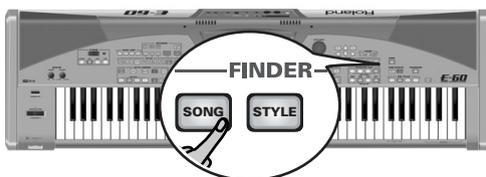
You can also press the $\boxed{\text{SONG}}$ field on the main page to select songs.

The display changes to:

• Select the memory area that contains the song you want to change: press $\boxed{\text{INTERNAL MEMORY}}$, $\boxed{\text{FLOPPY}}$ or $\boxed{\text{EXTERNAL MEMORY}}$.
If you press $\boxed{\text{FLOPPY}}$ or $\boxed{\text{EXTERNAL MEMORY}}$, insert the memory card or floppy disk with the desired song into the slot (or drive). See "Playing back songs (Standard MIDI Files)" on p. 35 for details about selecting songs.

• Select the song by pressing its field.

■**Before changing the MAKEUP TOOLS settings of a Style**

• Press a button of the STYLE pad to select a Music Style family.
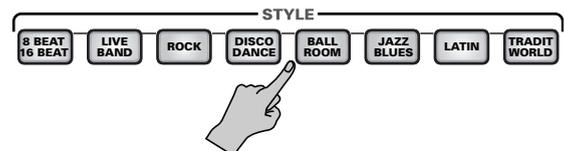
• If necessary, use the $\boxed{\text{PAGE 1}}$~$\boxed{\text{PAGE 4}}$ fields to switch pages.

The number of pages depends on the selected family.

• Press the field of the Music Style you want to use. See pages 25 and 73 for details about selecting Music Styles.

General procedure

(1) Press the [MAKEUP TOOLS] button once or twice.

This depends on whether you want to change the settings of the selected song or Style. The display changes to:

...or:

(If this page is not displayed, press the [PALETTE] field in the upper left corner.)

All modifications on this page and the related pages are SysEx data that alter the actual song data (without replacing them). Only the E-60/E-50 can read these data. Other SMF players (and the 16-track Sequencer) ignore these newly added SysEx data. (There is currently no other instrument capable of reading the MSE Style format the E-60/E-50 uses, so compatibility is no issue.)

(2) Use the [◄][►] fields in the lower right corner to select the instrument you want to edit.
If you select a Drum Set, the display changes to:

(See page 106 for an explanation of the [PERC MUTE] and [DRUM MUTE] fields.)

The [OCTAVE] field disappears (because transposing the drum part in octave steps doesn't make sense).

(3) Press the [JUMP TO 1st NOTE] field to jump to the location where the instrument you are about to change is used.
Playback starts automatically from that point.
If you can barely hear the Tone/Drum Set, press the [SOLO] field (indicator icon must "light"), then use [JUMP TO 1st NOTE] to jump to the first note of that instrument. Press [SOLO] again to switch this function off.

(4) Use the [MUTE] field to switch the selected instrument off.
The corresponding part is no longer played back. (Just as a reminder: this setting only applies to the selected instrument and thus not necessarily to the entire track.)
Note: In the case of the drums, you can mute two instrument groups separately.

(5) Press the long sound name field (next to the instrument icon) and use the TONE buttons and the display to select another sound or Drum Set.

(6) Press the [EXIT] button to return to the SONG MAKEUP TOOLS (or STYLE MAKEUP TOOLS) PALETTE page.

(7) Press the field of another parameter you want to edit and use the [DATA/ENTRY] dial or the [DEC]/[INC] buttons to set the desired value.
You can also press the [DATA/ENTRY] dial and enter the value via the on-screen numeric pad.

Most parameter values can be positive or negative, so remember to also use the [+/–] field.

(8) Press [UNDO CHANGES] to reset all parameters on this page to their saved settings.

(9) To save your changes at this stage, press the [SAVE] field and see page 108.
You can also press another field in the top row to change yet other parameters before saving your modified song or Style.

PALETTE

Pressing the PALETTE field on any of the MAKEUP TOOLS pages takes you to the following page where you can set the most fundamental parameters of the instruments used by the selected song or Style.

Press the field of the parameter you want to edit and use the DATA/ENTRY dial or the DEC/INC buttons to set the desired value. You can also press the DATA/ENTRY dial and use the numeric pad.

● VOLUME—The volume of the selected instrument. Negative values decrease the current volume, positive values increase it.
● PANPOT —Use this parameter to change the stereo placement of the selected instrument.
   Note: In the case of Drum Sets, this setting applies to all drum/percussion instruments. There is also a parameter that can be set for certain drum instruments. See page 106.
● REVERB—Use this parameter to set the Reverb Send Level. The "send level" refers to the amount of the signal transmitted to the reverb effect – and hence to the strength (intensity) with which the instrument is processed.
● CHORUS—Use this parameter to set the Chorus Send Level. The "send level" refers to the amount of the signal transmitted to the chorus effect – and hence to the strength (intensity) with which the instrument is processed.
   Note: The four parameters discussed so far can also be set on the SONG/STYLE MAKEUP TOOLS mixer page (see p. 102).
● VELOCITY—This parameter allows you to modify the velocity range of the instrument in question. "0" means that the recorded values are left untouched, negative values reduce all velocity values by the same amount (leaving differences between notes intact), while positive settings increase all velocity values.
● OCTAVE—(Only for sounds) Use this parameter to transpose the selected instrument up or down by up to 4 octaves.

SOUND EDIT for sounds

Pressing the SOUND EDIT field on any of the MAKEUP TOOLS pages takes you to the following page where you can make more refined changes to the selected sound (see "SOUND EDIT for Drum Sets" on p. 106 if you selected a Drum Set).

Press the field of the parameter you want to edit and use the DATA/ENTRY dial or the DEC/INC buttons to set the desired value. You can also press the DATA/ENTRY dial and use the numeric pad.

● CUTOFF—This filter parameter allows you to make the selected sound darker or brighter. Positive Cutoff settings mean that more overtones will be allowed to pass, so that the sound becomes brighter. The further this value is set in the negative direction, the fewer overtones will be allowed to pass and the sound will become softer (darker). See page 80 for a graphic.
   Note: For some sounds, positive (+) Cutoff settings will cause no noticeable change because the preprogrammed Cutoff parameter is already set to its maximum value.
● RESO—This is a parameter one invariably associates with a synthesizer. When the Resonance value is increased, the overtones in the area of the cutoff frequency will be emphasized, creating a sound with a strong character.
   Note: For some sounds, negative (–) RESO settings may produce no noticeable change because the Resonance is already set to the minimum value.

The following parameters allow you to set the sound's "**envelope**". See page 79 for details.
● ATTACK—This parameter adjusts the onset of the sound. Negative values speed up the attack, so that the sound becomes more aggressive.
● DECAY—This parameter adjusts the time over which the sound's volume and Cutoff frequency fall from the highest point of the attack down to the sustain level.
   Note: Percussive sounds usually have a sustain level of "0". Piano and guitar sounds are in this category. Holding the keys for a long time will thus have little effect on the duration of the notes you are playing, even if you select a high value here.
● RELEASE—This parameter adjusts the time over which the sound will decay after the note is released until it is no longer heard. The cutoff frequency will also fall according to this setting.

Use the following three parameters if you think the instrument in question has too much (or could use a little more) vibrato.

Note: Some sounds already contain natural (sampled) vibrato whose depth or speed cannot be changed.

● **VB RATE**—This parameter adjusts the speed of the pitch modulation. Positive (+) settings make the preset pitch modulation faster and negative (–) settings make it slower.

● **VB DEPTH**—This parameter adjusts the intensity of the pitch modulation. Positive (+) settings mean that the "wobble" becomes more prominent, while negative (–) settings make it shallower.

● **VB DELAY**—This parameter adjusts the time required for the vibrato effect to begin. Positive (+) settings increase the time before vibrato will begin and negative settings shorten the time.

If necessary, press the SAVE field to save your settings (page 108).

SOUND EDIT for Drum Sets

If the instrument icon to the left of the sound name depicts a drum kit, the page selected with SOUND EDIT looks as follows. Here, you can edit the Drum Set as a whole.

Press the field of the parameter you want to edit and use the DATA/ENTRY dial or the DEC/INC buttons to set the desired value. You can also press the DATA/ENTRY dial and use the numeric pad.

● **CUTOFF**—Allows you to make the Drum Set (all instruments) brighter (positive values) or darker (negative values). The further this value is set in the negative direction, the fewer overtones will be allowed to pass and the sound will become softer (darker).

● **RESO**—This parameter allows you to add a "synthetic" character to your Drum Sets (choose a positive value) or to make it sound more natural.

• Use the DRUM MUTE field to suppress (or add) the drum sounds.

• Use the PERC MUTE field to suppress (or add) the percussion sounds.

If necessary, press the SAVE field to save your settings (page 108).

DRUM INSTR EDIT

If the instrument icon to the left of the sound name depicts a drum kit, you can also press the DRUM INSTR EDIT field. Doing so takes you to the following page where you can make more refined changes for certain instruments of the selected Drum Set:

This page effectively allows you to reconfigure your Drum Set (but you cannot select sounds from another Set).

Note: The names of the drum/percussion sounds depend on the currently selected Drum Set. The sounds are usually similar in nature, however.

• Use PAGE ← → to select the drum instrument you want to replace with a different sound (watch the icon that appears to the left of this field).

• Use the DATA/ENTRY dial or the DEC/INC buttons to select another sound.
The first sounds you can select for a given instrument are usually variations of the snare, bass drum, etc. But turning the DATA/ENTRY dial long enough, you could also select any other sound (even a melodic one).

Press the field of the parameter you want to edit and use the DATA/ENTRY dial or the DEC/INC buttons to set the desired value.

● **VOLUME**—Use this parameter to set the volume of the selected drum instrument.

● **PANPOT**—Use this parameter to set the stereo placement of the selected drum instrument. "0" means "no change", negative values shift the instrument towards the left and positive values shift it towards the right.

● **REVERB** & **CHORUS**—Use these parameters to set the reverb or chorus send level of the selected drum instrument. The effects themselves can be changed on the COMMON page (see below).

● **VELOCITY**—This parameter allows you to modify the velocity range of the drum instrument in question. "0" means that the recorded values are left untouched, a negative setting reduces all velocity values by the same amount (leaving variations intact), while a positive setting shifts all velocity values in a positive direction.

● PITCH—Use this parameter to tune the selected drum instrument higher or lower. "0" means that the pitch is left unchanged.

If necessary, press the $\boxed{\text{SAVE}}$ field to save your settings (page 108).

COMMON

After pressing the $\boxed{\text{COMMON}}$ field, the display looks as follows. The parameters on this page apply to the entire song or Music Style – and do therefore not depend on the kind of sound (or Drum Set) you selected.

Press the field of the parameter you want to edit and use the $\boxed{\text{DATA/ENTRY}}$ dial or the $\boxed{\text{DEC}}$/$\boxed{\text{INC}}$ buttons to set the desired value.

● REVERB TYPE—This parameter allows you to specify what kind of reverb effect you need. The available reverb types are:

Room1, Room2, Room3	These types simulate the reverb characteristics of a room. The higher the number (1, 2 or 3), the bigger the "room" becomes.
Hall1, Hall2	These types simulate the reverb of a small (1) or large (2) concert hall and thus sound much "bigger" than the Room types above.
Plate	This algorithm simulates the acoustics of a concert hall.
Delay	A delay effect (no reverb). Works a lot like an echo effect and thus repeats the sounds.
Pan Delay	This is a stereo version of the above delay effect. It creates repetitions that alternate between the left and right channels.

The "**Original**" setting means that the song uses its own (programmed) reverb settings. The "**User Prog**" setting (for Styles) means that the Style uses the reverb settings of the currently active User Program.

● CHORUS TYPE—Chorus broadens the spatial image of the sound and creates a stereo impression. You can choose from 8 types of Chorus.

Chorus 1~4	These are conventional chorus effects that add spaciousness and depth to the sound.
Feedback	This is a chorus with a flanger-like effect and a soft sound.
Flanger	This is an effect that sounds somewhat like a jet airplane taking off and landing.
Short Delay	This is a full-fledged delay effect that can be used instead of a chorus or flanger. As you will see, there are a lot of parameters you can program.
Short DLY FBK	This is a short delay with many repeats.

The "**Original**" setting means that the song uses its own (programmed) chorus settings. The "**User Prog**" setting (for Styles) means that the Style uses the chorus settings of the currently active User Program.

● REVERB LEVEL & CHORUS LEVEL—These parameters allow you to modify the output level of the Reverb (or Chorus) processor.

● SONG VOLUME (or STYLE VOLUME)—This parameter allows you to set the overall volume of the selected song (or Style) if you think it is too loud/soft compared with other songs (or Styles).

● TEMPO—Allows you to change the song's or Style's tempo ($\quarternote$= 20~250).

● TRANSPOSE (only for songs)—This parameter allows you to transpose all song parts (except the drums) up to 12 semitones (1 octave) up or down. This value is written to the song data and used every time you play back this song.

Before saving your settings

Before saving your "made-up" song or Style to the internal memory, a card or a floppy disk, you can (but you don't have to) "commit" your changes, thereby turning them into "regular" song or Style data. (MAKEUP TOOLS settings are SysEx data only the E-60/E-50 understands.)

This may come in handy for two reasons:

• To be able to edit the "final" version of your song or Style with the 16-track Sequencer, Style Converter or Style Composer. Those functions ignore the "cosmetic" SysEx data you add using the MAKEUP TOOLS.

• To play back your new song version on another sequencer or your computer. The Styles can be read by the E-60/E-50, the E-80 and the G-70.

To commit your changes, press the $\boxed{\text{FREEZE DATA}}$ field on any of the pages discussed so far:

The display responds with "Operation Complete" when the data have been converted. **Careful**: this operation cannot be undone.

Note: This operation is unnecessary for files you only want to use with the E-60/E-50.

Saving your modified song or Style

The changes saved with the following procedure affect the selected song or Style file directly. They are not part of the settings that are saved to a User Program.

(1) If you are happy with your changes and wish to preserve them, press the SAVE field.
The display changes to…

…or:

(2) If necessary, change the song's or Style's name.
You only need to do this if you want to preserve the original version (and only if you want to save the new version to the same memory area). The edits you have just performed can only be read by the E-60/E-50 and so are of little use to other SMF players or arranger instruments.

(3) Specify the memory area where you want to save the Style or song: EXTERNAL MEMORY, FLOPPY or INTERNAL MEMORY.

(4) Press the STYLE NAME or SONG NAME field.

(5) Enter the name (page 44).

(6) Next, press the following fields (if necessary) and enter the following information.
SONG   ARTIST, GENRE, FILE NAME

STYLE   COUNTRY, GENRE

(7) Press the EXECUTE field.

If you selected the drive that contains the original version with the same name, the following message is displayed:

• Press the YES field to overwrite the old version. Press the NO field if you don't want to overwrite this song or Style and return to the previous page. Then enter a different name (or select a different media).

If the song or Style doesn't yet exist in the selected memory area, the data are saved and the following message is displayed:

11. More refined song functions

Let us have a look at additional and more refined functions you can use for song playback. See page 129 for recording and editing sequencer songs.

Programming MARK & JUMP locations

The supplied songs in the internal memory come with four locations already memorized that can be selected by pressing MARK & JUMP 1 *~* 4 *(page 36). When you select a song that contains such markers, the indicators of the MARK & JUMP buttons light. For songs that do not contain these indications, the indicators remain dark.*

Editing and programming MARK JUMP locations can be carried out as follows:

(1) Press and hold a MARK JUMP button 1~4.

Press whichever button you like. The display changes to:
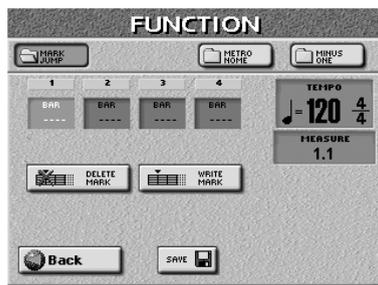
(2) Press the field that corresponds to the MARK JUMP button for which you wish to program a different location (1~4).
The following can be done both during playback and while it is stopped.

(3) Do one of the following:
- Start song playback and press the WRITE MARK field. This inserts the number of the current measure in the field that lights.
  –or–
- Stop playback. Press the DATA/ENTRY dial and use the on-screen numeric keypad to enter the desired bar number. Press the Delete field of the numeric pad to dispose of the last number you entered. Example: if you wanted to enter "14" and then notice that you pressed the 4 field twice ("144"), press Delete to get rid of the second "4".

  (You can also use the DATA/ENTRY dial or the DEC/INC buttons.) As soon as you enter a new value, an EDIT message appears next to the memory number.
- Press the CLOSE field to return to the previous page.

- Press the WRITE MARK field to confirm your setting. The EDIT message disappears.
  Repeat steps (2)~(3) to program new locations for the remaining MARK JUMP buttons.

(4) Press the DELETE MARK field to clear the measure indication of the selected MARK JUMP button.
The indicators of MARK & JUMP buttons for which a location has been programmed light.

Pressing a MARK JUMP button for which no measure location has been entered (and whose indicator therefore does not light) has no effect.

> Want to save time? Here's the quickest way to program MARK JUMP locations:
> - Select the song you want to program MARK locations for.
> - Select the MARK & JUMP page (see above).
> - Press TOP I◄ to return to the beginning of the song, then PLAY/STOP ►/■ to start playback.
> - Press the 1 field to select it.
> - Press the WRITE MARK field where you want the first marker to be. This position is memorized.
> - Press the WRITE MARK field where you want the second marker to be.
> - Repeat the previous two steps for memories 3 and 4.
> - Continue with step (5).

The MARK JUMP locations are additional information for song files that need to be saved:

(5) Press the SAVE field.

(6) Press the INTERNAL MEMORY, FLOPPY or EXTERNAL MEMORY field to select the save destination.
If you choose FLOPPY or EXTERNAL MEMORY, do not forget to insert floppy disk or card.

(7) If necessary, change the song's name.
You only need to do this if you want to preserve the original version of your song. The MARK JUMP information can be read by the E-60/E-50, E-80, and G-70, but is of little use to other sequencers or SMF players: they simply ignore it. So you might as well save the song under its original name. Besides, you can also save the song to a different memory area (card or disk).

See page 44 for how to change the name.

(8) Press the EXECUTE field.
If you selected the memory area that contains the original version, the following message is displayed:

SAVE SONG

A file of this name
already exists
Overwrite?

○ YES   ○ NO

● Back   ● EXECUTE

• Press the YES field to overwrite the old version. Press the NO field if you do not want to overwrite this song and return to the main page. Then enter a different name (or select a different media).

If the song doesn't exist in the selected memory area, the data are saved.

(9) Press the EXIT button to return to the main page.

Working with the Song Finder

The Song Finder allows you to quickly locate the songs you want to play back. You will see in a minute that it is far more powerful when you work with the internal memory or memory cards than with floppy disks.

(1) Press the FINDER SONG button.

FINDER

SONG   STYLE

You can also press the SONG field on the main page.

SONG New Song   SCALE TUNE

The display changes to:

SONG LIST

INDEX ALL   EXTERNAL MEMORY FLOPPY INTERNAL MEMORY

SONG NAME   ARTIST   GENRE   FILE NAME

FEVER   FEVER.MID
♪ FIRSTDAY   FIRSTDAY.MID
FORCA   FORCA.MID
FRIDAYNI   FRIDAYNI.MID
HEREWEGO   HEREWEGO.MI

OPTIONS FINDER FOUND 47 / GLOBAL 47   ◄ PAGE 3 ►

Songs that also contain lyrics information are flagged by means of a "Lv" icon. The note (♪) means that the file in question also contains Play & Search information.

(2) **Specify the memory area that contains the song you need: EXTERNAL MEMORY, FLOPPY or INTERNAL MEMORY.**
The display shows a list of 5 songs in the selected memory area.

■**If you press INTERNAL MEMORY or EXTERNAL MEMORY...**
...the display changes to:

SONG LIST

INDEX ALL   EXTERNAL MEMORY FLOPPY INTERNAL MEMORY

SONG NAME   ARTIST   GENRE   FILE NAME

FEVER   FEVER.MID
♪ FIRSTDAY   FIRSTDAY.MID
FORCA   FORCA.MID
FRIDAYNI   FRIDAYNI.MID
HEREWEGO   HEREWEGO.MI

OPTIONS FINDER FOUND 47 / GLOBAL 47   ◄ PAGE 3 ►

"FOUND": found entries.
"GLOBAL": total number of songs in that memory area.

The SONG NAME, ARTIST, GENRE and FILE NAME fields allow you to sort songs in alphabetical order.
This sorting order is determined by the selected category.

(3) If the name of the song you want to use to is already displayed, press its line.

(4) To display the next 5 songs, press the ► field in the lower right corner.
You can press this field as many times as necessary (or until it is no longer displayed).

To return to a previous group of 5 songs, press ◄. (You can also use the DATA/ENTRY dial and the DEC/INC buttons to change pages.)

Locating files with the Song Finder
The following is **not** available for **floppy disks**.

a) Choose a category (Index)
The highest hierarchical level of the Song Finder database is called "Index". All search operations apply to the selected Index (and therefore not necessarily to all files in the internal memory or on card).

• Press the INDEX field in the top left corner.

SONG INDEX

CATEGORY   RENAME   EDIT   COPY

ALL   Background   Old & Gold
      Top 40   Latin
      Up-Tempo   Regional
      Ballads   Celebration

● Back

• Either press the field that corresponds to the desired song category or –if you're not sure which category the song belongs to– ALL.
Note: The remaining options on this page (RENAME, EDIT and COPY) are only available for specific categories.

• Press Back. The display returns to the page shown under step (1) above. This time, however, only songs belonging to the selected Index are displayed.

b) Select the Finder

The powerful part starts as soon as you press the
FINDER field.

c) Search the database

The next step is to decide how the Song Finder should
look for the files:

- Press the ALPHABETIC ORDER field to search for all
entries that start with the characters you entered
("BEA", for example). Files that match the specified
criteria will be displayed at the top of the list.
The order depends on the button icon you activated
(SONG NAME, ARTIST, GENRE or FILE NAME).
- Press the SEARCH ONLY field to have the E-60/E-50
search the selected column for files that contain the
supplied information. (This would allow you to also
locate a file called "Raggabeat" if you entered "BEA".)
Note: See p. 35 for how to use the Play & Search function.

d) Decide what you want to look for

- Press the SONG NAME field if you want the E-60/
E-50 to look for song names, then enter the name (or
part of it).
- Press the ARTIST field if you want to look for an art-
ist's name, then enter the name (or part of it).
- Press the GENRE field to locate a specific genre
(Rock'n'Roll, 16-Beat, etc.), then enter the desired
characters.
- Press the FILE NAME field if you happen to know the
(usually cryptic) name of the song file, then enter the
desired characters.

Entering characters

Enter only as many characters as you think are nec-
essary to find the song you are after. The character
string you enter can be used in two ways (see below).

- Use the ← and → fields to select the position for
which you wish to enter a new character.
- Use the alphanumeric keypad to enter the desired
characters. This keypad works exactly like the keypad
of a cellphone: you may have to press an alphanu-
meric field several times to select the desired charac-
ter or number.
Note: There is no A/a field here, because the Finder makes no
distinction between upper- and lower-case letters.
- The Delete field allows you to delete the character
indicated by the cursor. Press and hold it to clear all
characters.
- Press Space to insert a blank (or the number "0").

- If you forgot to insert a character, use ← or → to
select the position where the missing character
should be inserted. Then press Insert, followed by the
character you wish to insert.
- To enter numbers without cycling through the char-
acters, press the NUM LOCK field, so that its indica-
tor icon lights. After entering the numbers, switch it
off if you need to enter characters again.

- Press the FIND field to start your search.
If the following message appears, the E-60/E-50 was
unable to locate files that match the search criteria:

In that case all song names are listed (the "xx of yy"
entry lists twice the same number of files).

If the E-60/E-50 did find one or several matches, the
"xx" number will be smaller than the "yy" number.

- Press the field of the song you need and do your
thing.

Editing the Song Finder information

The Finder information is based on search criteria that
need to be supplied for Standard MIDI Files. Normal
Standard MIDI Files do not contain them.

Note: Some of the following information cannot be entered for
(or read from) files on floppy disk.

Song Options

After pressing the FINDER SONG button, the display
looks as follows:

The OPTIONS field in the lower left corner provides
access to a display page where you can add database
information. This also works for songs that already
contain entries.

(1) First select the song whose database information
you wish to edit by pressing its field.

(2) Press the OPTIONS field.

(3) Now do one of the following:

■Rename

This function allows you to change (or supply) information for the selected song.

• Press the SONG NAME, ARTIST, GENRE or FILE NAME field and enter the desired characters. You can also rename all four of them.

• The A/a field allows you to switch between uppercase and lowercase characters.
Note: If you select a song on floppy disk, only the SONG NAME and FILE NAME can be edited.

• Press the EXECUTE field. The "Operation Successful" message appears to confirm this operation.

■Delete

This function allows you to delete the selected song from the internal memory area, memory card or floppy disk. You should use this as sparsely as possible. Once a song is gone, there is indeed no way to restore it.

• Press the DELETE field. Deleting a song cannot be undone, which is why the following question is now displayed:

YES deletes the song file.

NO leaves the file intact and takes you back to the initial Song Finder page with the song list.

Back leaves the file intact and takes you back to the SONG LIST page.

Note: If a song you delete here is assigned to a Play List, an error message ("File not found") is displayed during playback of that Play List and playback stops at that step. So be careful.

■P&S Input

You can also add a musical phrase to your songs if you wish to take advantage of the Play & Search facility. See page 35 for how to use that facility in a real-life situation. Here's how to program the phrase:

Note: This information cannot be entered for files that reside on a floppy disk. Be sure to copy your song to the internal memory or a memory card (see p. 112) and to edit that copy.

(1) On the SONG OPTIONS page, press the P&S INPUT field.

(2) Play the notes of the main theme (the one you'll most likely play when using Play & Search for locating this song).
The key and rhythm are of little importance (you must get the intervals right, though!). The boxes will display a quarter note for every note you played. Five "note boxes" thus mean that you played five notes.

(3) If you make a mistake, proceed as follows to correct it:
Press the DELETE LAST NOTE field if you only wish to correct the last note you entered.

Press ◄ RESET to erase all notes you have played so far. Then play the notes again.

(4) Press the EXECUTE field to save this information (i.e. the selected song file) in the internal memory or on memory card.
Songs for which there is Play & Search information are flagged with a note symbol (♪) to the left of their names.

■Copy

This function allows you to copy the selected song to another memory area.

Be sure to select a song before pressing the OPTIONS field on the SONG LIST page. Also bear in mind that the COPY page only lists songs that match the last search criteria you used for the SONG FINDER.

On the other hand, if you only need to copy certain songs on memory card or in the internal memory, using the FINDER would be a good idea: it helps you to avoid too many presses of the PAGE ◄ or ► field.

• On the SONG OPTIONS page, press the COPY field.

• Start by specifying the source that contains the song(s) you wish to copy: Press the FROM button icon several times to select the memory area.

INT MEMORY: The E-60/E-50's internal memory.

FLOPPY DISK: The floppy disk in the E-60/E-50's drive.

EXT MEMORY: The memory card in the E-60/E-50's PCM-CIA slot.

• Now specify the target you wish to copy the selected song(s) to: Press the TO button icon once or twice to select the memory area.

• If the name of the song you want to copy is already displayed, press its line. You can also select several songs.

To display the next 5 files, press the ➡ field in the lower right corner. You also use the DATA/ENTRY dial and the DEC/INC buttons.

You can press this field as many times as necessary (or until it is no longer displayed). To return to a previous group of 5 songs, press ⬅.

If you need to copy all songs that are currently displayed (on all available pages), press the ALL FILES field.

Note: If the target media (memory card or floppy disk) is not formatted, a message will be displayed that allows you to format it before the songs are copied.

(5) If you chose "EXT MEMORY" or "FLOPPY DISK" for "TO", disable the card's/disk's write protection and insert it into the PCMCIA slot or disk drive.
To disable the write protection of a floppy disk, close the "little window" (see p. 11). See the owner's manual of the memory card for how to disable its write protection.

Note: Not all cards have a write protection function.

(6) Press the EXECUTE field. (Press Back if you do not want to proceed, or to select other files.)

You are asked whether it is OK to overwrite all files on the destination media ("TO") that have the same file names as the files you are about to copy.

(7) Press the YES field if it is OK to overwrite files with the same names on the destination media. Press the NO field if files on the source ("FROM") media that have the same name as existing files on the destination ("TO") media should not be copied (only files with "original" names will be copied in that case).
The data are copied and a "Operation Successful" message confirms the end of the operation.

(8) Press the EXIT button to return to the main page.

Editing an Index
You can change the assignments of songs to a category and even edit the Index names. Furthermore, you can copy an Index entry (along with all its song assignments) to a different entry.

(1) Press the FINDER SONG button.

You can also press the SONG field on the main page.

The display changes to:

(2) Specify the memory area: EXTERNAL MEMORY or INTERNAL MEMORY.

(3) Press the INDEX field in the top left corner.

If the ALL field is currently selected, the display looks as follows:

The Index Edit functions are only available for "real" Index categories, so...

(4) Press the field of the Index category you wish to edit.

(5) Select the edit function you need by pressing its field:

■**Rename**
This function allows you to change the name of the selected Index.

● Press the RENAME field.

● Enter the new name (12 characters). See "Entering characters" on p. 111.
Note: The A/a field allows you to switch between uppercase and lowercase characters.

● Press the EXECUTE field to confirm the new name.

■**Edit**
This function allows you to assign the desired songs to the selected Index (or to remove existing song assignments).

● After performing step (4) above, press the EDIT field.

● Use the FINDER, SONG NAME, ARTIST, GENRE and FILE NAME fields to locate the desired file. See page 110.

● Press the fields of all songs you wish to assign to the selected Index category.
Selected songs are displayed on a light background. To remove a song from the selected category, press its field, so that it turns dark.

● If necessary, use the PAGE ← → fields to go to previous or subsequent list pages.
Note: When you change pages, new assignments (or removals) are automatically updated, which means that the contents of the selected category changes.

● Press Back to return to the SONG LIST page. Press EXIT to return to the main page.

■**Index Copy**
This function allows you to copy one Index category (along with all its song assignments) to a another category. You could take advantage of this for merging two categories to free up one category for new assignments.

Note: There are eight Index categories in all. You cannot create additional categories.

● After performing step (4) above, press the COPY field.

● In the left column (SOURCE), press the field whose assignments you wish to copy to another Index category. You can also use the ▲▼ fields.

● In the right column (DESTINATION), press the field of the index category you wish to copy the assignments to. You can also use the ▲▼ fields.

● Now specify how the song assignments should be copied:

Press the REPLACE field if the assignments of the DESTINATION Index should be erased and replaced by the entries of the selected SOURCE field.

Press MERGE if the song assignments of the SOURCE category should be added to the assignments of the DESTINATION Index (the DESTINATION category will contain more assignments than before).

Note: No song files are copied during this operation.

(6) Press the Back field to return to the SONG LIST page.

Note: Press the EXIT button to return to the main page.

Play List function

The Play List function allows you to prepare play lists of all the songs you want to use during a performance. The advantage of working with such "chains" is that you do not need to select files between songs.

Programming Play Lists

• If necessary, insert the memory card that contains the desired songs into the slot.

The Play List function is only available for songs on memory card (only one such card at a time) and in the internal memory. You may therefore have to copy all desired songs to that area before proceeding. See page 180 for details.

(1) Press the PLAY LIST button.

The display looks more or less as follows:

The names refer to Play Lists already available in the selected memory area.

(2) Specify the memory area you want to work with: EXTERNAL MEMORY or INTERNAL MEMORY.

Note: This is your last chance to select the memory area. Be aware that all songs you wish to assign to a Play List must reside in the selected memory area (Play Lists can only access the memory area where they are saved).

(3) Press the MAKE NEW field in the upper right corner.

You have just created a new Play List, which is still empty and therefore looks like this:

Play Lists consist of "steps" (up to 99) to which you can assign one song each.

(4) Press the SONG LIST field (or the DATA/ENTRY dial) to jump to the SONG LIST page.

The display looks more or less as follows:

(5) Locate the song you wish to assign to step 01.
- If it is already displayed, continue with step (6) below.
- If it is not yet displayed, use the PAGE ⬅️➡️ fields in the lower right of the display to change pages. (You can also use the DATA/ENTRY dial or the DEC/INC buttons.)
- You can also use the following fields for narrowing down your search if you are overwhelmed by the number of songs (and pages you need to scroll): INDEX, SONG NAME, ARTIST, GENRE, FILE NAME and FINDER. See page 110.

(6) Select the song you wish to assign by pressing its field.

(7) Press the GET IT field.
This takes you to the following page. The song is assigned to step 01 and step 02 becomes the last one of your list ("-----End-----"):

The -----End----- field is selected automatically, so you can assign a song to it right away.

(8) Repeat steps (4)~(7) above to assign a song to this step.

(9) After compiling your play list, press the SAVE field.

(10) Enter a name (up to 18 characters).
See p. 44 for how to enter names.

(11) Press the EXECUTE field to save your list to the indicated memory area.

Note: This only saves the Play List (i.e. the references to existing song files). The songs themselves are not saved, because that is unnecessary. On the other hand, if you delete a song (see p. 112) that is referenced by a Play List step, playback stops at that (empty) step during playback and the "File not found" message appears.

The display shows a confirmation message and then returns to the PLAY LIST page.

(12) Press the EXIT button to return to the main page. That page now looks as follows:

See "Using Play Lists" on p. 118 for how work with your list. If you need to return to the Play List, either press the PLAY LIST field in the upper left corner or press and hold the PLAY LIST button.

Editing Play Lists

If, while programming or using a Play List, you notice that one song is missing from the list or if you decide not to use a given song after all, you need to edit your Play List. Steps (1)~(3) below are only necessary if you want to edit a different list than the one you have just programmed.

(1) Press and hold the RECORDER PLAY LIST button to jump to the PLAY LIST page.

(2) Press the field of the list you wish to edit.
Depending on the number of lists already present in the selected memory area, you may have to use the scroll bar (or DATA/ENTRY dial or the DEC/INC buttons).

(3) Press the [EDIT] field or the [DATA/ENTRY] dial.

(4) Proceed as follows to edit your Play List:

■**Inserting steps**
To add a step and assign a song to it, select the step that should follow it, then press the [INSERT STEP] field. (Example: to insert a step before step 04, press the [04] field.)

This takes you to the following display page:

(5) Locate the song you wish to assign to the inserted step.
• If it is already displayed, continue with step (6) below.
• If it is not yet displayed, use the PAGE [←][→] fields in the lower right of the display to change pages.
• You can also use the following fields for narrowing down your search if you are overwhelmed by the number of songs (and pages you need to scroll): [INDEX], [Song NAME], [ARTIST], [GENRE], [FILE NAME] and [FINDER]. See page 110.

(6) Select the song you wish to assign by pressing its field.

(7) Press the [GET IT] field.

■**Editing a step**
You can also decide to assign another song to any step that contains an erroneous reference. To do so, press the field of the step that needs correcting, press [SONG LIST] and continue with step (5) above.

■**Deleting steps**
On the PLAY LIST EDIT page (see left), select the step you wish to delete and press the [REMOVE STEP] field.

All subsequent steps now move up one entry. Example: if you delete step 04 of a list that contains 10 steps, step 05 becomes 04, step 06 becomes 05, etc.

(8) Press the [SAVE] field to save your edited list.

If the new Play List has the same name as an existing one, the following message appears:

Press [YES] to replace the old file with your new version. Press [NO] if you want to rename your new Play List before saving it.

Note: By pressing the [Back] field, you return to the EDIT page.
Note: When you press the [EXIT] button, the following message appears:

Press [YES] to return to the main page and discard any changes you have made up to that point. Press [NO] to return to the EDIT page (without deleting your changes).

■**Clear ALL**
The PLAY LIST EDIT page contains a [CLEAR ALL] field you can use to remove *all* steps from the currently selected Play List. In effect, this means that only the name is preserved, while the list can/must be programmed again.

Using Play Lists

Here's how Play Lists can be used for your performances:

• If necessary, insert the memory card that contains the list (and songs) you need into the slot.

(1) Press the PLAY LIST button.

You can release it as soon as the display looks more or less as follows:

(2) Use the scrollbar, the DATA/ENTRY dial or the DEC/INC buttons to scroll through the Play Lists (if available and necessary).

(3) Press the field that corresponds to the list you want to use.

(4) Press the EXIT button to return to the main page.

The PLAY LIST indicator now lights to indicate that the Play List function is active.

(5) Press the PLAY/STOP ►/■ button to start playback of your play list.

At the end of the first song step, the next song is selected automatically, if the RECORDER NEXT SONG button lights. (If you stop playback halfway into the song, then start it again, the next step is played back.)

If the NEXT SONG button does not light, playback stops at the end of the current step, the next step is loaded, but playback needs to be started using the PLAY/STOP ►/■ button. (If you stop playback halfway into the song, then start it again, playback continues from the place where you stopped it.)

The two fields (|◄◄ ►►|) that appear on the main page during list playback allow you to navigate in your play list. The added display shows the name of the currently selected play list.

Use the |◄◄ field to select the previous step and ►►| to select the next step. If you do so while playback is running, the previous or next song will be played back as soon as the current song is finished.

Note: The MARK JUMP buttons are also available during Play List playback, so feel free to use them (see p. 36).

(6) Press PLAY/STOP ►/■ again to continue with the next step.

(7) To switch off the Play List function, press the PLAY LIST button (it goes dark).
Selecting another (single) song via the Song Finder or a User Program with a song link will temporarily deactivate Play List function. This is signaled by the flashing PLAY LIST indicator. When the "external" song is finished, the Play List function resumes and the indicator of the PLAY LIST button lights steadily.

Note: If Play List playback is stopped at an entry for which NEXT SONG is not active and if you then select a User Program with a song link, the Play List function is switched off. Pressing PLAY/STOP ►/■ then starts playback of the song recalled by the User Program.

Managing Play Lists

Play Lists can be renamed and deleted.

• If necessary, insert the memory card that contains the list you wish to rename or delete into the slot.

(1) Press the PLAY LIST button.
The display looks more or less as follows:

(2) Use the scrollbar or the DATA/ENTRY dial move through the available Play Lists (if available and necessary).

(3) Press the field that corresponds to the list you need.

■**Renaming a Play List**

To change the name of the selected Play List, press the RENAME field.

Enter the desired characters (page 44) and press the EXECUTE field. After a brief confirmation, the display returns to the Play List page.

Back leaves the list intact and takes you back to the PLAY LIST page, where you could select another Play List to be deleted.

Note: You do not need to save a Play List after renaming it.

■**Deleting a Play List**

See steps (1)~(3) above, and then press the DELETE field. As this may ruin your work, you need to confirm this command:

You have three options here. Be aware that a deleted Play List cannot be recalled.

YES deletes the list file (but not the Standard MIDI Files it refers to).

NO leaves the list intact and takes you back to the PLAY LIST page.

Note: Even if you delete the selected list, this "only" disposes of the play list proper. The songs assigned to the list are not deleted and can thus be used in isolation or assigned to new/other Play Lists.

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12. Editing Lyrics

Your E-60/E-50 contains functions that allow you to add Lyrics to Standard MIDI Files that do not contain them. You can also edit the Lyrics data of Standard MIDI Files that conform to the Tune 1000 format (as well as other Lyrics formats). This may come in handy when you keep forgetting the words of a song you wish to use for your performances and want them to be included in the song file.

The E-60/E-50 only allows you to link ("synchronize") Lyrics data to the music data of the loaded Standard MIDI File. The text data proper must be entered on a Windows-compatible PC (or a Mac and saved as .TXT data for Windows). See right for the supported characters.

```
!"#$%&'()*+,-.0123456789:; =?ABCDEFGHIJKLMNOP
QRSTUVWXYZ[]^_` abcdefghijklmnopqrs
tuvwxyz{|}~€□,ƒ„…†‡ˆ‰ Š‹ŒŽ□□'‘'"" •––˜™š›
œ□žŸ ¡¢£¤¥¦§¨©ª«¬®¯°±²³´µ¶·¸¹º»¼½¾¿
ÀÁÂÃÄÅÆÇÈÉÊËÌÍÎÏ ÐÑÒÓÔÕ
Ö×ØÙÚÛÜÝÞ ßàáâãäåæçèéêëìíîïðñòóôõ ö÷øùúûüýþÿ
```

Adding Lyrics to a song

Here's a step-by-step tour of how to add Lyrics data to a Standard MIDI File:

(1) **Prepare the text file with the lyrics you wish to associate with a given song.**
Use a word processor program on your computer, taking care to type a return after every line or word you wish to synchronize separately. The synchronization function (see below) always works with entire lines of text (i.e. until the following return). In any case, no line should contain more than 28 characters.

(2) **Export the file as .TXT file and save it to a floppy disk, a memory card the E-60/E-50 can read or transfer it to the E-60/E-50 via USB (see p. 184).**

(3) **On the E-60/E-50, load the song you wish to add Lyrics to.**
See "Playing back songs (Standard MIDI Files)" on p. 35 for details about selecting songs.

(4) Press the LYRICS&SCORE button.

The display changes to:

(5) Press the OPTIONS field, followed by the TXT IMPORT field.

The display changes to:

Importing a text file for Lyrics synchronization or editing Lyrics data is only possible while song playback is stopped. If you forget to stop playback (by pressing RECORDER PLAY/STOP ▶/■), a "Can't execute. Song is running" error message is displayed.
Let's import the text file you created earlier:

(6) **Select the memory area that contains the text file you wish to associate with the Standard MIDI File in the E-60/E-50's RAM memory: press INTERNAL MEMORY, FLOPPY or EXTERNAL MEMORY.**
If you press FLOPPY or EXTERNAL MEMORY, insert the memory card or floppy disk with the desired song into the slot (or drive).

(7) **Press the line that contains the name of the text file you want to use.**
If you don't see the desired file name, use the scrollbar, the DATA/ENTRY dial or the DEC/INC buttons to select another group of 8 files. (If you still can't find the file, it may not end in ".TXT" or not be a text/ASCII file.)

(8) **Press the EXECUTE field to load the text file you selected.**

The message means that the lyrics of the previously selected song will be erased. If that's OK with you, press the YES field. If not, press the NO field to return to the TXT IMPORT page, where the previous lyrics are displayed.

Now you're all set for the synchronization work:

(This page can also be selected with the LYRICS SYNCHRO field.)

This display page should contain the first line of the text you imported. The function can also be used to correct the synchronization of Lyrics data contained in a song you loaded.

Here's what we're going to do: every line of the text you imported can be associated with a given quarter note of the song. We'll do this while the song is playing back. Synchronizing text lines is a matter of pressing the TEMPO TAP button on the beats where the currently selected line should appear during normal playback of the Standard MIDI File. Each press of the TAP button associates the text line below the arrows (▶ ◀) with the quarter note where the button was pressed. The preceding line automatically scrolls above the (▶ ◀) section, while the next line appears below the arrows.

(9) Press TOP I◀ to return to the beginning of the song or use BWD or FWD to jump to a measure that lies a little ahead of the place where the first line should be displayed during normal operation.
Note: If the song already contains Lyrics, they will follow the measures (indicated in the upper right-hand corner) when you press BWD or FWD.

(10) Press the RECORDER REC ● button (its indicator lights).

Press FWD to go to another measure without causing the text to follow.

(11) Press the PLAY/STOP ▶/■ button.
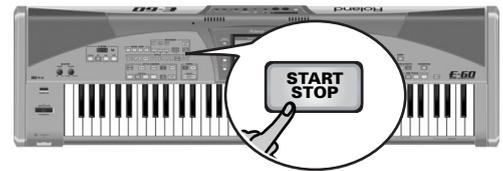
Playback (and Lyric synchronization recording) starts and the REC ● button lights.

(12) On the beat where the first text line should be displayed, press the TAP button.

(13) Repeat this at the quarter note where the second line should be displayed.

(14) Press TAP on all beats where the subsequent text lines should appear.
In places where there are no lyrics to synchronize (e.g. the bridge or the solo), you can press FWD to quickly jump to the next measures to which you wish to link a line of text.

(15) Press the PLAY/STOP ▶/■ button when all Lyrics data have been synchronized.

(16) If you made a mistake somewhere, you can return to that measure using BWD and start anew from that position.
In that case, you will need to synchronize all remaining text (even text you already synchronized) until the end of the song.

(17) Press the DISK&MEDIA button.

The display changes to:

DISK & MEDIA

- Press SAVE, followed by SONG.

SAVE SONG

This page allows you to save the current song to the internal memory, a memory card or a floppy disk. It will be saved along with the Lyrics data you synchronized.

(18) Press the EXTERNAL MEMORY, FLOPPY or INTERNAL MEMORY field to select the area where you want to save the song.

(19) To save the song under a different name, press SONG NAME and enter the desired name. Repeat this with the FILE NAME entry.
See page 111. If necessary, you can also supply the required ARTIST and GENRE information for use with the SONG FINDER function.

Note: The E-60/E-50 supports both upper- and lower-case letters for file names. Choose whichever is more convenient (or clearer).

Note: ARTIST and GENRE are not available for files you save to floppy disk.

(20) Press the EXECUTE field to save the song.
If the selected memory area already contains a song of that name, you are asked whether it is OK to overwrite it.

- Press the YES field to overwrite the file. This replaces the song in question with the new version.
- Press the NO field to return to the SAVE SONG page, change the name, then press EXECUTE again.
The "Operation Successful" message confirms the end of the operation.

(21) Press the EXIT button to return to the main page.

You can also use the above procedure to resynchronize lyrics already contained in the song file (if you feel the synchronization isn't perfect). See step (4) and following on page 120.

Exporting Lyrics data as text file

Here's what you need to do to export the Lyrics data contained in a Standard MIDI File as text data. This may be useful for editing or printing the lyrics using your computer.

Note: This only works if the Standard MIDI File contains lyrics data.

(1) Load the song whose Lyrics data you want to export as text file.
See "Playing back songs (Standard MIDI Files)" on p. 35 for details about selecting songs.

(2) Press the LYRICS&SCORE button.

If the display is blank at this point, the selected song doesn't contain Lyrics data. It is therefore impossible to export it as text.

(3) Press the OPTIONS field, followed by the TXT EXPORT field.
The display changes to:

LYRICS OPTIONS

(4) Name the text file.
This is only necessary if you do not agree with the suggested name (i.e. the one of the song in question).
See page 44 for how to enter the desired name.

(5) Press the EXTERNAL MEMORY, FLOPPY or INTERNAL MEMORY field to select the area where you want to save the text file.

(6) Press the EXECUTE field to save the file.
The E-60/E-50 returns to the LYRICS page.

(7) Press the EXIT button to return to the main page.

13. Using the 16-track sequencer

Your E-60/E-50 contains a powerful sequencer with a host of edit functions. Even so, you will quickly notice that the 16-track Sequencer is as simple to operate as it is powerful.

When you press the RECORDER 16-TRK SEQ. button, the display changes to:
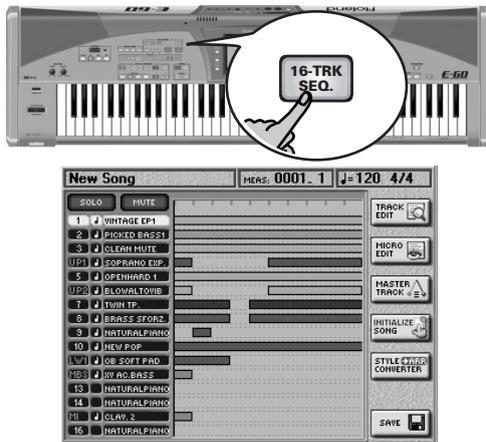
Important notes

- If you use the 16-track Sequencer to edit a song that already contains Cover modifications, the Cover settings are ignored and erased when you save the edited version of your song. We therefore recommend "freezing" the Cover settings before continuing (see p. 107).
- While in this mode, the BALANCE knob does not allow you to set the balance between the Song and Keyboard parts (it only affects the volume of the Song parts).
- While the E-60/E-50's 16-track Sequencer is selected, the notes played on the keyboard are not transmitted via MIDI.

About the sequencer's main page

Let us first look at the information shown on this page:
The SOLO button icon allows you to listen to the selected track in isolation (it mutes all other tracks). The **selected track** is highlighted. To select another track, simply press its row in the left column of the display. (You can also use the ▲▼ buttons to select a track.)

The MUTE button icon allows you to temporarily switch off the selected track, which may be useful when you want to record or edit additional parts without being distracted by already existing parts.

SOLO and MUTE need to be set as follows: First press the SOLO or MUTE field, then press the fields of the tracks you want to solo or mute (you can mute several tracks).

Note: The MUTE function is not available while the SOLO function is on. You can, however, select another track at that time, which is then played back in isolation. The SOLO function, on the other hand, can be activated while the MUTE function is on.

Soloed tracks are flagged with an "S", while muted tracks use the letter "M". The remaining indications in the second column from the left are:

"♩" (note symbol): The track is currently playing. If you look at the example above, you will notice a vertical line on top of several horizontal bars. The vertical line refers to the current position within the song (which is also indicated in the "MEAS" field). The horizontal bars indicate that a track contains musical data in that position. Now look again at the illustration: only the tracks that contain note data at the current position and that are not muted have the "♩" symbol.

If, while the page above is displayed, you press the RECORDER REC ● button, track "1" (which is currently selected) will be flagged with an "R" (for "Record"). **You can only record one track at any one time.**

The button icons in the right-most column are:

TRACK EDIT	see page 129
MICRO EDIT	see page 143
MASTER TRACK	see page 139
INITIALIZE SONG	see page 125
STYLE CONVERTER	see page 147

General considerations

The 16-track sequencer can be used to record sequentially onto 16 tracks (one track after the other). Since the 16-track sequencer and the Recorder share the same RAM memory (they are, in fact, different incarnations of the same concept), you can lay down your first tracks using the Recorder (with or without Arranger) and then select the 16-track sequencer to add new tracks or change existing ones. The Recorder allows for simultaneous multitrack recording, which is not possible with the 16-track Sequencer. While you are working with the 16-track Sequencer, *the Arranger is not available.*

Tracks and MIDI channels

Tracks are assigned to MIDI channels on a 1 : 1 basis (i.e. Track 1= MIDI channel 1,... Track 12= MIDI channel 12, etc.). Since the Keyboard parts have been assigned to the MIDI channels in such a way as to allow for easy Minus-One playback using the Recorder (page 35), you should take a minute to study the table below.

Obviously, if you record a song with Arranger backing, the respective Style parts (ADR, ABS, etc.) are recorded onto the tracks that are assigned to their MIDI channels.

Track (SMF part)	MIDI channel	E-60/E-50 parts	
		Recorder	Arranger
1 (Piano)	1	–	Accomp 1
2 (Bass)	2	–	A. Bass
3 (Chords)	3	–	Accomp 2
4 (Solo/Melody)	4	Upper1	Upper1
5 Harmony	5	–	Accomp 3
6 (Counter-melody)	6	Upper2	Upper2
7 (Not specified)	7	–	Accomp 4
8 (Not specified)	8	–	Accomp 5
9 (Not specified)	9	–	Accomp 6
10 (Drums)	10	Drums	A. Drums
11 (Not specified)	11	Lower	Lower
12 (Not specified)	12	M.Bass	M.Bass
13 (Not specified)	13	–	–
14 (Not specified)	14	–	–
15 (Not Specified)	15	Melody Intell.	Melody Intell.
16 (Not specified)	16	–	–

There is yet another track, called "MASTER", that is used for recording the time signature, the tempo, as well as general SysEx data.

Example 1: Recording a song from scratch

Let us first record a song from scratch using the 16-track sequencer. If you already played back a song since switching on the E-60/E-50, the song RAM memory already contains data we need to erase. (Even if the E-60/E-50's song RAM memory is still empty, using the INITIALIZE SONG function would be a good idea.)

(1) Press the RECORDER 16-TRK SEQ. button.

The display changes to:
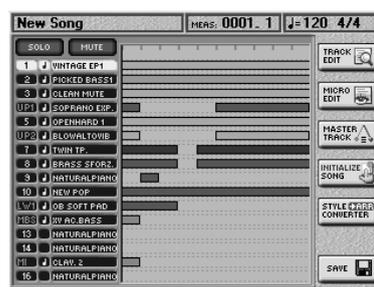
(2) Press the INITIALIZE SONG field.
The display changes to:

(3) If you want the E-60/E-50 to set most parameters for you, press one of the TEMPLATES fields.
Here is what the options mean:

ORCHESTR	Selects orchestral sounds suitable for classical music and film scores.
BAROQUE	Selects instrument sounds suitable for chamber music.
ROCK	Selects sounds suitable for rock music.
FOLK	Selects sounds suitable for folk music.
COUNTRY	Selects sounds suitable for country music.
ELECTRONIC	Selects sounds suitable for dance music.
POP	Selects sounds often used in pop arrangements.
JAZZ	Selects sounds suitable for jazz combos.
ETHNIC	Selects sounds suitable for world music.

(4) Press the following three fields and enter the desired values using the DATA/ENTRY dial or the DEC/INC buttons.

● Tempo—Allows you to specify the initial tempo of the new song (♩= 20~250). Choose a tempo that is comfortable for recording. You can set the final tempo by editing the MASTER track (see p. 139) or by recording it after activating the TEMPO REC SW parameter (see p. 126).

● Time Signature BEAT—If your new song uses the 4/4 time signature, there is no need to change this value. Otherwise, enter the desired time signature (1/2~32/16).

The warning alerts you to the fact that pressing EXECUTE may have disastrous consequences. See "Saving your song" on p. 128 if you still need to save your previous song.

■ **Using two drum tracks**

The E-60/E-50 allows you to use as many drum tracks as you like: simply assign a Drum Set to the desired track and start recording. This requires no particular initialization procedure.

Track 10, however, can only play Drum Sets and should therefore be used for your main percussion applications.

(5) Press the EXECUTE field to really initialize the Song RAM memory (which you haven't done so far).

The E-60/E-50 now initializes the Song RAM memory and jumps to the main 16-track Sequencer page.

Preparations

(6) Press the RECORDER REC ● button.

The display changes to:
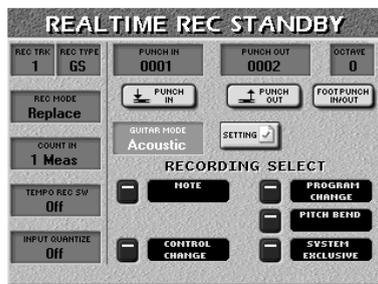
(7) Press the REC TRK field and use the DATA/ENTRY dial or the DEC/INC buttons to select the track you want to record to.

(8) Press the REC TYPE field and use the DATA/ENTRY dial or the DEC/INC buttons to specify how the track should behave (some are always "GS tracks"):

If you select "GS" (or if there is no alternative).

If you select the corresponding part.
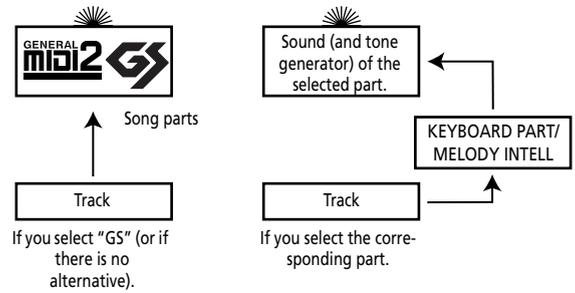
Track	REC TYPE	
1~3	GS (cannot be changed)	
4	GS	UP1*
5	GS (cannot be changed)	
6	GS	UP2
7~10	GS (cannot be changed)	
11	GS	LWR**
12	GS	MBS**
13	GS (cannot be changed)	
14	GS (cannot be changed)	
15	GS	MELODY INTELL**
16	GS GS (cannot be changed)	

[*] The track uses the same sound as the Keyboard part it is linked to. The important thing to remember is that whenever you assign a different sound to the connected Keyboard part, the track in question automatically switches to that sound as well.

(9) To record a guitar part onto the selected track (not available for track 10):

• Press the GUITAR MODE "display" and use the DATA/ENTRY dial to select "Acoustic" or "Electric". (Select "Off" if you want to use the track for something else.)

• Press the SETTINGS field to jump to the GUITAR MODE page and set up your "guitar". See page 29 for details.

• Press the EXIT button to return to the REALTIME REC STANDBY page.

• Skip to step (11).

Note: The "DOUBLING" function (Guitar Mode Options) is not available here, because only one track can be recorded at any one time.

(10) Assign the desired sound to the recording track you selected.

See "Selecting sounds for the Keyboard parts" on p. 27. You can play on the keyboard to check whether the sound matches the mood of the part you wish to record.

(11) Specify how the data will be added to the track during recording (**REC MODE**):

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Select "**Replace**" if the track contains data you wish to replace with new data. This erases all data of the selected track from the place where you start recording until the end. ("Replace" is selected by default for empty tracks.)

Select "**Mix**" to add new notes to the ones already recorded on the selected track. This recording mode is particularly useful for recording the rhythm track (10) because you can first record the bass and snare drums, then add a few tom hits here and there and record the HiHat, for example.

("Mix" is selected by default for tracks that already contain data.)

(12) If you don't want to start and stop recording manually, use the PUNCH fields:

- Press the PUNCH IN field and use the DATA/ENTRY dial or the DEC/INC buttons to specify the measure where recording should start.
  If you start playback a few bars before this position, the sequencer will activate recording as soon as it reaches this measure.

- Press the PUNCH OUT field and use the DATA/ENTRY dial or the DEC/INC buttons to specify the measure where recording should end. Recording is deactivated when the sequencer reaches this position. Playback will continue, however and needs to be stopped using the PLAY/STOP ►/■ button.

- To take advantage of the PUNCH IN/OUT function, you need to switch on the PUNCH IN and/or PUNCH OUT button icon.
  Note: The Punch In/Out function can also be assigned to an optional footswitch (see p. 56). For those applications, there is no need to set the PUNCH IN & OUT positions beforehand. But you still need to press the FOOT PUNCH IN/OUT field.

(13) If necessary, press the OCTAVE field and set the required octave transposition (–4~4).
  This allows you to record "special noises" (usually assigned to the lowest notes numbers), like the ones of fingers sliding over guitar strings, etc., if the selected sound provides them.

(14) Specify how long the count-in should be before recording starts: press the COUNT-IN field and use the DATA/ENTRY dial or the DEC/INC buttons to select one of the following options.

Off	No count-in. Recording starts as soon as you press the PLAY/STOP ►/■ button (while REC ● flashes).
1 Meas	Recording starts after a 1-bar count-in.
2 Meas	Recording starts after a 2-bar count-in.
Wait Note	Recording starts as soon as you play a note on the keyboard. (There will be no count-in.)

(15) If you want to record tempo changes, press the TEMPO REC SW field and use the DEC/INC buttons to select "On".

This option allows you to use the TEMPO ◄SLOW FAST► buttons and/or TAP to vary the tempo while recording. Those changes are recorded to the MASTER track.

(16) Press the INPUT QUANTIZE field and set the desired resolution.
  Quantize corrects the timing of your notes by shifting them to the nearest grid mark. Use the DATA/ENTRY dial or the DEC/INC buttons to specify the number of steps per measure (i.e., the resolution). Here is an example:
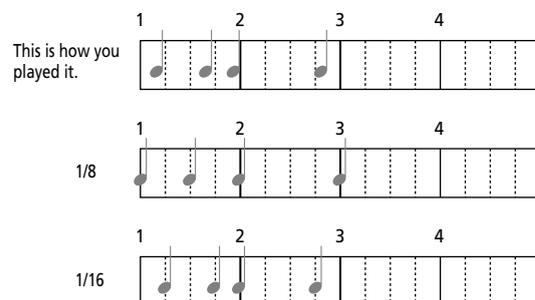
The setting range is: Off, 1/4, 1/8, 1/8T, 1/16, 1/16T, 1/32, 1/32T and 1/64. As this Quantize function changes the way in which your notes are recorded, you may want to select "Off" here. The 16-track sequencer has a second Quantize function that you can use more selectively (i.e., for notes that are definitely late/early). See p. 130.

(17) Specify what should be recorded by activating the corresponding **RECORDING SELECT** button icons:

RECORDING SELECT	Meaning
NOTE	Only note messages are recorded. (Pitch Bend, modulation, etc., data are ignored.)
CONTROL CHANGE	Control change messages, such as modulation (CC01), expression (CC11), etc. (CC00 and CC32 bank select messages also belong to this group.)
PROGRAM CHANGE	Program change messages. Only necessary if the track should use different sounds.
PITCH BEND	Left/right movements of the BENDER/MODULATION lever.
SYSTEM EXCLUSIVE	SysEx messages for the MASTER track.

(18) Select the desired sound for your new track.

(19) Select the bar where playback and/or recording should start:

- Press the RECORDER TOP I◄ button to return to the beginning of the song (measure "1"). —or—

- Use the RECORDER ►► (or ◄◄) button to select a measure slightly ahead of where you want to start recording.

(20) Press the PLAY/STOP ►/■ button or play the first notes (if you selected COUNT IN= "Wait Note").

Note: The PLAY/STOP ►/■ function can also be assigned to the D Beam controller (E-60) or an optional footswitch (see "Start/Stop Song" on p. 53, "Play/Stop" on p. 55).

(21) Play the new part.

(22) Press the RECORDER PLAY/STOP ►/■ button to stop recording.

Example 2: Adding tracks

Here's how to add a track to a song in the E-60/E-50's Song RAM memory. This is only meaningful after recording at least one part or after playing back an existing song. See page 124 for how to start a new song.

Please bear with us and perform all indicated steps to get a feel for the way the 16-track Sequencer "ticks". Besides, what you learn here will also come in handy for recording your own Music Styles.

Note: See also "Easy editing and useful functions" on p. 129 for some additional functions that are not covered here.

Note: If the song you wish to supplement contains MAKEUP TOOLS settings, be sure to "freeze" those data and to save your new version before changing it. See "Before saving your settings" on page 107.

(1) Press the 16-TRK SEQ. button.
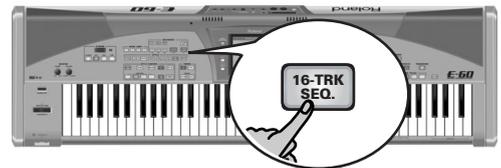
The display changes to:
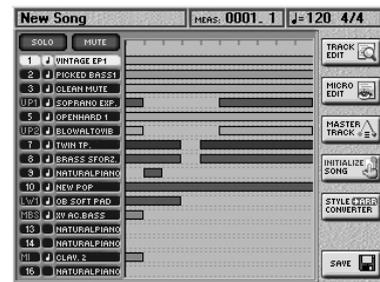
The "MEAS" field at the top of the display informs you about the current measure. The tempo and time signature are displayed next to it. Use the RECORDER ◄◄ and ►► buttons to jump to another measure or TOP |◄ to return to the beginning of the song.

(2) Press the RECORDER REC ● button.

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The display changes to:

REALTIME REC STANDBY

REC TRK	REC TYPE	PUNCH IN	PUNCH OUT	OCTAVE
1	GS	0001	0002	0

REC MODE: **Replace**

PUNCH IN · PUNCH OUT · FOOT PUNCH IN/OUT

GUITAR MODE: **Acoustic** SETTING ✓

COUNT IN: **1 Meas**

TEMPO REC SW: **Off**

INPUT QUANTIZE: **Off**

RECORDING SELECT
NOTE · PROGRAM CHANGE · PITCH BEND · CONTROL CHANGE · SYSTEM EXCLUSIVE
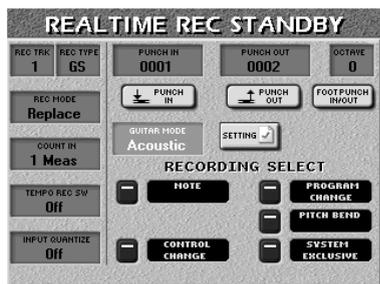
(3) Press the $\boxed{\text{REC TRK}}$ field and use the $\boxed{\text{DATA/ENTRY}}$ dial or the $\boxed{\text{DEC}}$/$\boxed{\text{INC}}$ buttons to select the track you want to record to.

(4) Press the $\boxed{\text{REC TYPE}}$ field and use the $\boxed{\text{DATA/ENTRY}}$ dial or the $\boxed{\text{DEC}}$/$\boxed{\text{INC}}$ buttons to specify how the tracks linked to the Keyboard parts should behave (see p. 125).
Note: "REC TYPE" can only be changed for the Keyboard parts (UP1, UP2, LWR, MBS) and the MI part.

(5) See step (7) and following on page 125 for what to do now.
Note: Select a track that either contains no data or whose data may be overwritten ("Replace"). If you select REC MODE= "Mix", the new data are added to the data already present on the selected track.

(6) Press the $\boxed{\text{PLAY/STOP} \blacktriangleright/\blacksquare}$ button or play the first notes (if you selected COUNT IN= "Wait Note").

Note: The PLAY/STOP function can also be assigned to the D Beam controller (E-60) or an optional footswitch (see "Start/Stop Song" on p. 53, "Play/Stop" on p. 55).

(7) Play the new part.

(8) Press the RECORDER $\boxed{\text{PLAY/STOP} \blacktriangleright/\blacksquare}$ button to stop recording.

Saving your song

The 16-track sequencer uses a special portion of the E-60/E-50's RAM memory where all editing takes place. To ensure that you do not forget to save your song after recording and/or editing it, you are given the opportunity to do so upon leaving the 16-track Sequencer page (by pressing the $\boxed{\text{EXIT}}$ button):

Note: The Song RAM memory is erased when you switch off your E-60/E-50.

Note: If you use the 16-track sequencer to edit a song that already contains Cover modifications, the Cover settings are ignored and erased when you save the edited version of your song. We therefore recommend saving such songs under a different name (unless you used $\boxed{\text{FREEZE DATA}}$ before you started editing your song. See "Before saving your settings" on page 107.)

(1) Press $\boxed{\text{YES}}$ to save your changes (and the entire song). This will take you to the following display page:

SAVE SONG

(Press $\boxed{\text{NO}}$ to return to the main page without saving the song.)
If you don't want to wait until the above warning ("Song has been changed…") is displayed automatically, proceed as follows. Using this "manual" save function has the advantage that you can save your song whenever you are happy with your latest recording or edits. Bear in mind that a power failure is all it takes to lose your song. Don't wait until it is too late…

• Press the $\boxed{\text{SAVE}}$ field on the 16-track Sequencer's main page.
The display now responds with:

SAVE SONG

You can also select this page by pressing the $\boxed{\text{DISK\&MEDIA}}$ button→ $\boxed{\text{SAVE}}$ field→ $\boxed{\text{SONG}}$ field.

(2) Specify where you want to save your song:
• Press the $\boxed{\text{INTERNAL MEMORY}}$ field to select the E-60/E-50's internal memory as target (this is a 16MB storage area similar to a hard disk).
• Insert a floppy disk into the drive and press the $\boxed{\text{FLOPPY}}$ field.
• Press the $\boxed{\text{EXTERNAL MEMORY}}$ field. This option is only available if you connected a memory card to the E-60/E-50's PCMCIA slot.

You need to give your song two names: a SONG NAME and a FILE NAME. The FILE NAME is the one that allows the E-60/E-50 to recognize your song.

(3) Press the SONG NAME button icon.

(4) Enter the name:

- Move the cursor to the desired position using ← and →.

- Enter the character for that position using the alphanumeric keypad. In many instances, you will have to press the desired field several times to select the desired character.

- Use the A/a field to alternate between capitals and small letters.

- Press the Delete field to delete the character indicated by the cursor. Press and hold it to clear all characters.

- Press Space to insert a space.

- Press Insert to insert a character at the current position. All characters behind this position move one position further to the right.

(5) Press the FILE NAME field and enter the file name. See p. 73 for details. Here, you can enter 18 characters. All characters will be capitals.

(6) If you want to add more Finder information, press the ARTIST and GENRE fields and enter the desired characters.
See "Working with the Song Finder" on p. 110 for details about the Song Finder.

Note: These two indications are not available for files you save to floppy disk.

(7) Press the EXECUTE field to save your song.
The display tells you that the data are being saved, after which it returns to the "SAVE SONG" page.

(8) Press the EXIT or the RECORDER 16-TRK SEQ. button to return to the main page.

Editing 16-track songs

Easy editing and useful functions

After recording a few tracks, you may want to do some touching up. Here are some easy things you can do. See "Editing one or several tracks (TRACK EDIT)" on p. 129 for more elaborate functions.

■Muting tracks

When recording rhythmically intricate parts, it may be necessary to mute already recorded parts that might distract you. To do so, return to the 16-track Sequencer's main page, press the MUTE field and then the tracks you don't want to hear. Such tracks are flagged with an "M".
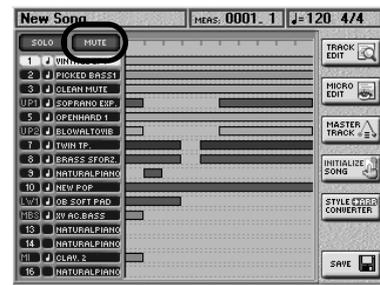
This setting is not saved. Press the MUTE field again to switch off the function.

Note: The MUTE function is not available while the SOLO function is switched on.

■Solo

If you need to listen to a track in isolation, press the SOLO field and the field of the track you want to solo and start playback. This mutes all other tracks, while the selected track is flagged with an "S". You can also select the track to be soloed using the ▲▼ buttons.

Press the SOLO field again to switch off the function of the same name.

■Song Cover and Song Makeup Tools

The 16-track Sequencer does not recognize changes made to a song using the Cover and SONG MAKEUP TOOLS functions. It only "sees" the original song data. You can, however, "burn" such changes into the song file before you start editing it (see p. 107).

Editing one or several tracks (TRACK EDIT)

The TRACK EDIT environment of the 16-track Sequencer provides 12 functions: Quantize, Erase, Delete, Copy, Insert, Transpose, Change Velo, Change Gate Time, Merge, Global Change, Shift Clock and Track XChange. There is also a MICRO EDIT environment that allows you to add, delete or change individual events. See page 143 for details.

Here's some information that may help you decide whether to use a TRACK EDIT or the MICRO EDIT function: if you don't need to see the events you want to change, choose a TRACK EDIT function. If the TRACK

EDIT level does not provide the function you need or if you want to see the notes, MIDI messages, etc., choose the MICRO EDIT environment.

Here is how to select functions:

(1) Load the song you wish to edit (if it does not yet reside in the E-60/E-50's Song RAM memory). See p. 35.

(2) Press the RECORDER 16-TRK SEQ. button.

(3) Save your song before continuing by pressing the SAVE field.

That way, you can always return to the original if your changes do not work out as expected. See "Saving your song" on p. 44 for details. On the SAVE SONG page, press the Back field to return to the 16-track Sequencer's main page.

(4) Press the TRACK EDIT field in the right column of the display.

(5) Press a field in the top two rows to select the desired TRACK EDIT function.

If, after selecting one of these functions and setting parameter values, you decide not to execute the transformation, do not press the EXECUTE field.

(6) Select the track(s) you wish to modify.

(7) Select the range ("FROM" and "TO") for the edit operation.

The FROM and TO parameters allow you to specify the positions (measure/beat/clock) of the track excerpt you want to change.

Example: to change measures 1~4 of the selected track, enter the following values:

FROM: BAR= 0001	TO: BAR= 0005
BEAT= 01	BEAT= 01
CPT= 000	CPT= 000

(8) Specify what you want to change and how it should change: press one of the parameter fields (to the right of the FROM/TO section) and use the DATA/ENTRY dial or the DEC/INC buttons.

(9) Confirm the operation by pressing the EXECUTE field.

(10) Press the Back field to return to the 16-track Sequencer's main page.

(11) Save your song.

QUANTIZE

Use this function if you chose not to quantize your music during recording (page 126) and now realize that the timing is not quite what you expected it to be. Quantizing after recording has the advantage that you can first listen to the original and then correct only those notes whose timing is definitely off.

■**TRACK (ALL, 1~16)**

Allows you to select the track you wish to edit. You can also select "ALL" here, in which case the operation applies to all tracks.

■**FROM**

● BAR (1~[last measure of the track or song])—Refers to the first measure to be edited. By default, the FROM value is set to the beginning of the selected track(s).

● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.

● CPT (1~119)—Refers to the starting CPT position. "CPT" is short for "Clock Pulse Time", the smallest unit used by the E-60/E-50. (There are 120 CPTs to every beat of a 4/4 bar.) Change this setting only if your edit operation should start after the selected beat.

■**TO**

By default, the TO position is set to the last event of the selected track (or the last event of the longest track when you select "ALL").

● BAR (1~[last measure of the track or song])—This is where you specify the bar position of the last measure to be edited.

● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.

● CPT (1~119)—Refers to the last clock that should be affected by the edit operation. Change this setting only if your edit operation should not end exactly on the selected beat.

■**FROM NOTE (0 C-~127 G9)**

This parameter allows you to set the note (or lower limit of the note range) to be modified within the specified FROM/TO time range.

This parameter is not displayed when you select EQUAL, UNEQUAL, HIGHER or LOWER.

■**TO NOTE (0 C-~127 G9)**

This parameter allows you to set the upper limit of the note range to be modified within the specified FROM/TO time range.

■**Fine-tuning the note range**

Before setting "FROM NOTE" (and possibly "TO NOTE"), it might be a good idea to decide how you want to use the note indications. Depending on the option you choose, "FROM NOTE" may not even be available, so that setting it beforehand would be a waste of time.

EQUAL	Only the selected note (note name/note number) will change. (The note can be set using the TO NOTE field.)
UNEQUAL	All notes except the one you select will change. (The note can be set using the TO NOTE field.)
HIGHER	Only notes above the selected one will change. (The note can be set using the THAN NOTE field.)
LOWER	Only notes below the selected one will change. (The note can be set using the THAN NOTE field.)
INSIDE	Only the notes between FROM NOTE and TO NOTE will change.
OUTSIDE	Only the notes below FROM NOTE and above TO NOTE will change.

■**RESOLUTION
(1/4, 1/8, 1/8T, 1/16, 1/16T, 1/32, 1/32T, 1/64)**

This parameter sets the resolution of the Quantize function. Be sure to always select the value of the shortest note you recorded. Otherwise, your part no longer sounds the way you played it, because shorter notes are shifted to the wrong positions.

■**STRENGTH (0%~100%)**

Use this parameter to specify how precise the timing correction should be. "0%" means that the selected RESOLUTION value is not applied ("0% correction"), while "100%" means that all notes are shifted to the mathematically correct positions.

Maybe first try values between "50%" and "85%" to preserve at least part of the original feel. If the result is not acceptable, repeat the operation with the same or a higher value.

■**EXECUTE**

Press this field to confirm your settings and edit the data.

ERASE

ERASE allows you to selectively delete data either within a specified range of measures, beats or clocks or from the entire track(s). When DATA TYPE is set to "ALL", ERASE substitutes the required number of rests for the data you delete, so that you end up with the equivalent number of blank measures. If you also want to eliminate the measures themselves, use DELETE (see below).

■**TRACK (ALL, 1~16)**

Allows you to select the track you wish to edit. You can also select "ALL" here, in which case the operation applies to all tracks except the MASTER track. The MASTER track can only be selected and edited in isolation (see p. 139).

■**FROM**

● BAR (1~[last measure of the track or song])—Refers to the first measure to be edited. By default, the FROM value is set to the beginning of the selected track(s).

● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.

● CPT (1~119)—Refers to the starting CPT position. "CPT" is short for "Clock Pulse Time", the smallest unit used by the E-60/E-50. (There are 120 CPTs to every beat of a 4/4 bar.) Change this setting only if your edit operation should start after the selected beat.

Erase NOTE From 2.1.0 To 4.1.0

■**TO**

By default, the TO position is set to the last event of the selected track (or the last event of the longest track when you select "ALL").

● BAR (1~[last measure of the track or song])—This is where you specify the bar position of the last measure to be edited.

● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.

● CPT (1~119)—Refers to the last clock that should be affected by the edit operation. Change this setting only if your edit operation should not end exactly on the selected beat.

■**DATA TYPE**

Allows you to select the data to be erased:

ALL   All parameters listed below.

Note   Only note messages.

P.Bender   Pitch Bend data.

Control   Control change messages.
Change

Prog. C   Program change messages.

NRPN   Non-registered-parameter-number messages.
           These are parameter control functions of the GS/
           GM2 format that are easier to use than SysEx
           messages (but basically have the same function).

RPN   Registered-parameter-number messages. They
           work like NRPN messages, and are understood by
           many GM- and GM2-compatible tone genera-
           tors.

CAF   Channel Aftertouch messages. If you don't really
           need them, these messages should definitely be
           erased, because they use a lot of memory.

■**FROM NOTE (0 C–~127 G9)**

This parameter is only displayed if DATA TYPE (see above) is
set to "Note". It allows you to set the note (or lower limit of
the note range) to be modified within the specified FROM/
TO time range.

It is not displayed when you select EQUAL, UNEQUAL,
HIGHER or LOWER. See also "Fine-tuning the setting
range".

■**TO NOTE (0 C–~127 G9)**

This parameter allows you to set the upper limit of the note
range to be modified within the specified FROM/TO time
range.

■**FROM CC (0~127)**

This parameter is only displayed if DATA TYPE (see above) is
set to something else than "Note". It allows you to set the
lower limit of the control change numbers or values to be
modified within the specified FROM/TO time range.

It is not displayed when you select EQUAL, UNEQUAL,
HIGHER or LOWER.

■**TO CC (0~127)**

This parameter allows you to set the upper limit of the con-
trol change numbers or values to be modified within the
specified FROM/TO time range.

■**Fine-tuning the setting range**

Before setting "TO NOTE" (and possibly "FROM NOTE") or
"TO CC" (and possibly "FROM CC"), it might be a good idea
to decide how you want to use the note or value indica-
tions. Depending on the option you choose, "FROM NOTE"
or "FROM CC" may not even be available, so that setting it
beforehand would be a waste of time.

EQUAL   Only the selected note or value will change.
           (The note/value can be set using the TO NOTE/
           TO CC field.)

UNEQUAL   All notes or values except the one you select
           will change. (The note/value can be set using
           the TO NOTE/TO CC field.)

HIGHER   Only notes or values above the selected one
           will change. (The note/value can be set using
           the THAN NOTE/THAN CC field.)

LOWER   Only notes or values below the selected one
           will change. (The note/value can be set using
           the THAN NOTE/THAN CC field.)

INSIDE   Only the notes or values between FROM NOTE/
           FROM CC and TO NOTE/TO CC will change.

OUTSIDE   Only the notes or values below FROM NOTE/
           FROM CC and above TO NOTE/TO CC will
           change.

■**EXECUTE**

Press this field to confirm your settings and edit the data.

DELETE

Unlike the ERASE function, DELETE not only erases
the data but also the measures, beats and/or CPT
units, so that all data that lie behind the TO position
are shifted towards the beginning of the track(s). For
this reason, you cannot choose the data type to be
erased.

Delete From 2.1.0 To 4.1.0
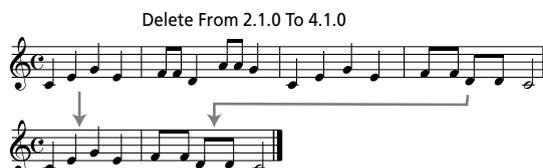
■**TRACK (AL, 1~16)**

Allows you to select the track you wish to edit. You can
also select "ALL" here, in which case the operation applies
to all tracks.

■**FROM**

● BAR (1~[last measure of the track or song])—Refers to
  the first measure to be edited. By default, the FROM
  value is set to the beginning of the selected track(s).

● BEAT (1~[number of beats per bar])—Specifies the
  beat position. The number of available beats depends on
  the time signature in the selected area.

● CPT (1~119)—Refers to the starting CPT position. "CPT"
  is short for "Clock Pulse Time", the smallest unit used by
  the E-60/E-50. (There are 120 CPTs to every beat of a 4/4
  bar.) Change this setting only if your edit operation
  should start after the selected beat.

■**TO**

By default, the TO position is set to the last event of the
selected track (or the last event of the longest track when
you select "ALL").

● BAR (1~[last measure of the track or song])—This is
  where you specify the bar position of the last measure to
  be edited.

● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.

● CPT (1~119)—Refers to the last clock that should be affected by the edit operation. Change this setting only if your edit operation should not end exactly on the selected beat.

■EXECUTE

Press this field to confirm your settings and edit the data.

COPY

The COPY function allows you to copy one track to another or excerpts of one or all tracks to a different location. The latter is useful if you need to repeat the chorus several times at the end of the song but do not feel like recording all those notes.

■SRC TRACK (ALL, 1~16)

Allows you to select the track whose data you wish to copy.

■FROM

● BAR (1~[last measure of the track or song])—Refers to the first measure to be edited. By default, the FROM value is set to the beginning of the selected track(s).

● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.

● CPT (1~119)—This is where you specify the CPT position of the beginning of the track excerpt to be copied. Unless you do not need all notes of the first bar, you should keep the default setting.

■TO

By default, the TO position is set to the last event of the selected track (or the last event of the longest track when you select "ALL").

● BAR (1~[last measure of the track or song])—This is where you specify the bar position of the last measure to be edited.

● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.

● CPT (1~119)—Refers to the last clock that should be affected by the edit operation. Change this setting only if your edit operation should not end exactly on the selected beat.

■COPY MODE (Replace, Mix)

Allows you to specify how the data should be copied:

● REPLACE—The selected FROM/TO range overwrites the data (of the destination track) in the area to which the selected data are copied.

Copy From 2.1.0 To 3.1.0 Into 4.1.0   SRC TRACK= 1/DST TRACK= 1

● MIX—The data in the selected range of the source track are added to the data on the destination track.

In most instances, "REPLACE" is probably a good choice when you set DATA TYPE to "ALL" or when you wish to substitute a given "message cluster" (modulation data, for example) for other messages of the same type (thus creating a perfect reproduction of a given control effect).

"MIX", on the other hand, may be useful for adding data to a number of beats or bars that were not there before, while keeping the original notes in those places. You can choose the kind of data to be copied using "DATA TYPE".

Note: The E-60/E-50 has no Undo function. Saving your song before copying will allow you to load the previous version if something goes wrong.

■COPY TIMES (1~999)

Sets the number of copies you wish to make. The value "3" means that you will end up with 3 contiguous copies.

■DATA TYPE

Allows you to select the data to be copied:

ALL	All parameters listed below.
Note	Only note messages.
P.Bender	Pitch Bend data.
Control Change	Control change messages.
Prog. C	Program change messages.
NRPN	Non-registered-parameter-number messages. These are parameter control functions of the GS/GM2 format that are easier to use than SysEx messages (but basically have the same function).
RPN	Registered-parameter-number messages. They work like NRPN messages, and are understood by many GM- and GM2-compatible tone generators.
CAF	Channel Aftertouch messages.

When you select "Note", a FROM NOTE and TO NOTE field appear that allow you to set the upper and lower limit of the notes to be copied. (See also "Fine-tuning the setting range" on p. 132.)

■DST TRACK

This is where you select the track to which you want to copy the selected data. If you set SRC TRACK to "ALL", the DST TRACK setting cannot be changed.

■INTO

The bar, beat and CPT values of the position the first data of the source track will be copied to.

■EXECUTE

Press this field to confirm your settings and copy the data.

Note: Though you can also copy data from track 10 (the official Drum track) to a "melodic" track and vice versa, this is only useful if you assign a Drum Set to the selected destination (DST) track. A drum track indeed sounds odd when played by a piano, for example (and a piano part is not necessarily suited for drumming).

INSERT

INSERT allows you to insert space and shift data that lie behind the FROM position further towards the end of the song (this is the exact opposite of DELETE). These empty measures can be "filled" using the COPY function or by recording new phrases in that area (using PUNCH IN/OUT, for example). (page 133).

Note: This function provides no TO pointer. Instead, you have to specify the length of the insert using the FOR values.

■TRACK (ALL, 1~16)

Allows you to select the track you wish to edit. You can also select "ALL" here, in which case the operation applies to all tracks.

■FROM

● BAR (1~[last measure of the track or song])—Refers to the first measure to be edited. By default, the FROM value is set to the beginning of the selected track(s).

● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.

● CPT (1~119)—Refers to the starting CPT position. "CPT" is short for "Clock Pulse Time", the smallest unit used by the E-60/E-50. (There are 120 CPTs to every beat of a 4/4 bar.) Change this setting only if your edit operation should start after the selected beat.

■FOR

Specifies how many bars, beats and CPTs are to be inserted.

● BAR, BEAT, CPT—See above.

■TIME SIGNATURE

If TRACK= "ALL", you can use these fields to set the time signature of the new measures (1~32 & 2, 4, 8, 16).

■EXECUTE

Press this field to confirm your settings and edit the data.

TRANSPOSE

This function allows you to transpose the notes of the selected track (non-note data obviously cannot be transposed).

■TRACK (ALL, 1~16)

Allows you to select the track you wish to transpose. You can also select "ALL" here, in which case the operation applies to all tracks. When used with the EQUAL option, TRANSPOSE is also useful for drum tracks. It allows you to select another snare or kick sound, for example. Most Drum Sets provide at least two snares, one assigned to note number 38 (D2) and a second assigned to note number 40 (E2). By entering FROM NOTE= "38", pressing the EQUAL field and selecting "2", you can change your D2 snare to the E2 snare.

■FROM

● BAR (1~[last measure of the track or song])—Refers to the first measure to be edited. By default, the FROM value is set to the beginning of the selected track(s).

● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.

● CPT (1~119)—Refers to the starting CPT position. "CPT" is short for "Clock Pulse Time", the smallest unit used by the E-60/E-50. (There are 120 CPTs to every beat of a 4/4 bar.) Change this setting only if your edit operation should start after the selected beat.

■TO

By default, the TO position is set to the last event of the selected track (or the last event of the longest track when you select "ALL").

● BAR (1~[last measure of the track or song])—This is where you specify the bar position of the last measure to be edited.

● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.

● CPT (1~119)—Refers to the last clock that should be affected by the edit operation. Change this setting only if your edit operation should not end exactly on the selected beat.

■VALUE (–127~0~127)

This is where you can set the transposition interval in semitone steps. If you wish to transpose a "C" part to "D", enter "2". As you see, you can transpose the highest possible MIDI note all the way down to the lowest (and vice versa).

Warning: "0" represents the lowest note the MIDI standard (and the 16-track sequencer) can handle, while "127" is the highest note. If you select "127" for note number "74 (D5)", for example, the resulting note number would be "201", which is impossible. Therefore, the sequencer will subtract "12" from "201" until the result is less than or equal to "127" – and therefore use the value "117" in our example.

This happens to all notes that would otherwise lie below "0" or above "127".

Note: Be careful when applying TRANSPOSE to a drum track (track 10 or any other track that uses a Drum Set). This results in a dramatic change of your rhythm section (with a triangle playing the kick notes, for example).

■FROM NOTE (0 C–~127 G9)

This parameter allows you to set the note (or lower limit of the note range) to be modified within the specified FROM/TO time range.

It is not displayed when you select EQUAL, UNEQUAL, HIGHER or LOWER. See also "Fine-tuning the setting range" on p. 132 for details about the six button icons.

■TO NOTE (0 C–~127 G9)

This parameter allows you to set the upper limit of the note range to be modified within the specified FROM/TO time range.

■EXECUTE

Press this field to confirm your settings and edit the data.

CHANGE VELO

The CHANGE VELO function allows you to modify the dynamics (called "velocity") of a track or excerpt. Increasing the velocity values means that the notes in question will be louder and brighter than before, while reducing the velocity values means the opposite. Use this function when you are happy with the timing of the notes but would like the sound to be brighter/louder or rounder/softer. You can decide to add/subtract a fixed velocity value ("BIAS") or to change them proportionally ("MAGNIFY").

■TRACK (ALL 1~16)

Allows you to select the track you wish to edit. You can also select "ALL" here, in which case the operation applies to all tracks.

■FROM

● BAR (1~[last measure of the track or song])—Refers to the first measure to be edited. By default, the FROM value is set to the beginning of the selected track(s).

● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.

● CPT (1~119)—Refers to the starting CPT position. "CPT" is short for "Clock Pulse Time", the smallest unit used by the E-60/E-50. (There are 120 CPTs to every beat of a 4/4 bar.) Change this setting only if your edit operation should start after the selected beat.

■TO

By default, the TO position is set to the last event of the selected track (or the last event of the longest track when you select "ALL").

● BAR (1~[last measure of the track or song])—This is where you specify the bar position of the last measure to be edited.

● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.

● CPT (1~119)—Refers to the last clock that should be affected by the edit operation. Change this setting only if your edit operation should not end exactly on the selected beat.

■BIAS (–99~99)

The BIAS parameter allows you to specify by how much the velocity values should change. Select a positive value to increase the velocity (the value is added to the velocity value of the affected notes) or a negative value to decrease the velocity values (that value is subtracted). Select "0" if you prefer to work with the MAGNIFY parameter (see below).

This parameter can be particularly useful for velocity switched sounds: slightly reducing or increasing the overall velocity, allows you to "shift" all notes to the "other" sound.
Note: Even the highest positive or negative VALUE doesn't allow you to go beyond "1" or "127". There is a reason why "0" is impossible: that value is used to indicate the end of a note (note-off). "127", on the other hand, is the highest velocity value the MIDI standard can muster. Adding a high positive velocity value may thus lead to all notes being played at "127".

■MAGNIFY (0~200%)

This parameter works like a "Compander" effect (a dynamics processor that simultaneously acts as compressor and expander), although it processes MIDI data: by selecting a value above "100%" you increase the differences between high and low velocity values in the selected range. Values below "64" are lowered, while values above "64" are increased. The result is therefore that the difference between pianissimo and fortissimo becomes far more pronounced.

MAGNIFY values below "100%" have the opposite effect: they push all velocity towards the imaginary center of "64", thus reducing differences in playing dynamics.

■FROM NOTE (0 C~127 G9)

This parameter allows you to set the note (or lower limit of the note range) to be modified within the specified FROM/TO time range.

It is not displayed when you select EQUAL, UNEQUAL, HIGHER or LOWER. See also "Fine-tuning the setting range" on p. 132 for details about the six button icons.

■TO NOTE (0 C~127 G9)

This parameter allows you to set the upper limit of the note range to be modified within the specified FROM/TO time range.

■EXECUTE

Press this field to confirm your settings and edit the data.

CHANGE GATE TIME

This function allows you to modify the duration of the notes in the selected time (FROM/TO) and note (FROM/TO NOTE) ranges. We recommend you only use this function to shorten notes that suddenly seem too long when you assign a different sound to the track in question. You cannot view the duration of the notes here, which makes editing the data "en bloc" a little bit hazardous. Use the MICRO EDIT environment to change the duration of individual notes.

After selecting a sound with a slow release (i.e. a sound that lingers on after all notes have been released), however, CHANGE GATE TIME will help you cut the notes down to size and thus avoid undesirable overlaps.

■TRACK (ALL, 1~16)

Allows you to select the track you wish to edit. You can also select "ALL" here, in which case the operation applies to all tracks.

■FROM

● BAR (1~[last measure of the track or song])—Refers to the first measure to be edited. By default, the FROM value is set to the beginning of the selected track(s).
● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.
● CPT (1~119)—Refers to the starting CPT position. "CPT" is short for "Clock Pulse Time", the smallest unit used by the E-60/E-50. (There are 120 CPTs to every beat of a 4/4 bar.) Change this setting only if your edit operation should start after the selected beat.

■TO

By default, the TO position is set to the last event of the selected track (or the last event of the longest track when you select "ALL").
● BAR (1~[last measure of the track or song])—This is where you specify the bar position of the last measure to be edited.
● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.
● CPT (1~119)—Refers to the last clock that should be affected by the edit operation. Change this setting only if your edit operation should not end exactly on the selected beat.

■ BIAS (CPT) (–4800~4800)

This parameter sets the amount by which the duration (or gate time) of the selected notes is to change. The shortest possible GATE TIME value is "1" (used for all drum notes), so that selecting "–1000" for notes with a GATE TIME value of "1" in the specified time range still leaves you with the same value.

■ MAGNIFY (0~200%)

Use this parameter rather than BIAS to produce proportional changes to the affected GATE TIME values.

Values below "100%" decrease the duration, while anything above "100%" increases it. Select "100%" if you prefer to work with the BIAS (CPT) parameter (see above).

■ EXECUTE

Press this field to confirm your settings and edit the data.

MERGE

Use this parameter to combine the data of two tracks (i.e. of all data the two tracks contain – from start to finish). The combined version can be found on the destination track (DST). Be aware that all data will use the same MIDI channel. The "SRC" track could therefore be used for recording a new part.

■ SRC TRACK (1~16)

Allows you to select the track whose data should be added to those of the "DST" track.

■ DST TRACK (1~16, except the track selected as "SRC")

Use this parameter to specify the track that should contain a combination of its original data and those of the selected source track.

■ EXECUTE

Press this field to confirm your settings and edit the data.

GLOBAL CHANGE

This function allows you to make quick changes to certain settings. The changes always apply to entire tracks (you cannot use GLOBAL CHANGE for just a few measures). Designed to help you "enhance" Standard MIDI Files, it is a wonderful tool for the following applications:

- "Upgrading" older Standard MIDI Files to take advantage of the E-60/E-50's new sounds.
- Global changes to the Reverb and/or Chorus Send values, which is very convenient when you suddenly notice that the effect is too prominent or not strong enough.

■ TRACK (ALL, 1~16)

Allows you to select the track you wish to edit. You can also select "ALL" here, in which case the operation applies to all tracks.

■ INIT VALUE

Press this field to reset all values on this page to their initial state if you want to start again.

You will notice that there are two kinds of changes that can be performed on this page: FROM/TO and INC/DEC.

■ FROM/TO

Enter the original data value (i.e. the value that is being used right now by the selected track(s)) in the FROM column. For TO, specify the new value that should replace the FROM value. These are what we call "absolute" changes: you don't add or subtract values, you replace them with other values. This system is only available for messages that allow you to select sounds or sound banks, namely:

● **CC00 (–––, 0~127, ALL)**—This control change is the so-called "MSB" bank select message. It allows you to select the Capital Tone (select "0") of a sound address if you don't want to use variations or to select another variation level. The TO value "CC00= 0" can be useful for ensuring GM compatibility, because that standard (unlike GM2 or GS) does not support tone variations. Select "–––" if the current setting must not change.

In the Tone list (see the "Parameter Reference" booklet), you will see that most sounds are variations. The value "8" for CC00 is probably the most popular one (as you would discover if you studied the list of 1596 sounds). To change any CC00 value to "8", for example, enter "CC00= ALL" for FROM and "CC00= 8" for TO. To change all occurrences of CC00 value "8" to another value (e.g. "16"), enter "8" for FROM and "16" for TO.

● **CC32 (–––, 0~127, ALL)**—This control change is the so-called "LSB" bank select message. Select "–––" if the current setting must not change.

● PC (–––, 1~128, ALL)—Use this parameter to change the address, a.k.a. program change number, of a sound (e.g. from "1" to "2"). Select "–––" if the current setting must not change.

■INC/DEC

These are so-called "relative" changes: the positive or negative value you set here will be added to or subtracted from the original values of the selected track(s). Use these fields to increase or decrease existing values for the entire selected track(s).

● Volume, Expression, Panpot, Reverb, Chorus (–127~ 127)—These parameters allow you to add (+) or subtract (–) a given value to/from the current Volume, Expression, Pan, Reverb Send or Chorus Send values. This may come in handy if the real-time changes you recorded turn out to be too high or too low.

■EXECUTE

Press this field to confirm your settings and edit the data.

SHIFT CLOCK

SHIFT CLOCK allows you to shift the notes within the selected FROM/TO range. It can be used for two things:

• To correct "slow" notes due to a slow(er) attack.
You may want to use SHIFT CLOCK after assigning a sound to a track that has a considerably slower attack than the sound you used for recording the part in question. This technique is frequently used in pop music to "time" 1/16-note string arpeggios played with a "slow" pad sound. Rather than have the notes begin at the mathematically correct time (e.g. 2-1-0), you could shift them to the left (e.g. to 1-4-115), so that the peak volume of the attack is reached on the next beat:

Original positions (slow attack, timing seems off)   Shift= –5 (timing sounds OK)

• To correct the timing of notes recorded via MIDI without quantizing them.
You can use external sequences as raw material for your songs. Recording such excerpts via MIDI may cause a slight delay (e.g. 5 CPT). If that is not acceptable, use SHIFT CLOCK to "push" the recorded data to the left (select "–5"). That allows you preserve any irregularities the original may contain because it was not quantized.

■TRACK (ALL, 1~16)

Allows you to select the track you wish to edit. You can also select "ALL" here, in which case the operation applies to all tracks.

■FROM

● BAR (1~[last measure of the track or song])—Refers to the first measure to be edited. By default, the FROM value is set to the beginning of the selected track(s).

● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.

● CPT (1~119)—Refers to the starting CPT position. "CPT" is short for "Clock Pulse Time", the smallest unit used by the E-60/E-50. (There are 120 CPTs to every beat of a 4/4 bar.) Change this setting only if your edit operation should start after the selected beat.

■TO

By default, the TO position is set to the last event of the selected track (or the last event of the longest track when you select "ALL").

● BAR (1~[last measure of the track or song])—This is where you specify the bar position of the last measure to be edited.

● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of available beats depends on the time signature in the selected area.

● CPT (1~119)—Refers to the last clock that should be affected by the edit operation. Change this setting only if your edit operation should not end exactly on the selected beat.

■DATA TYPE

Allows you to select the data to be shifted:

ALL   All parameters listed below.

Note   Only note messages.

P.Bender Pitch Bend data.

Control   Control change messages.
Change

Prog. C   Program change messages.

NRPN   Non-registered-parameter-number messages. These are parameter control functions of the GS/GM2 format that are easier to use than SysEx messages (but basically have the same function).

RPN   Registered-parameter-number messages. They work like NRPN messages, and are understood by many GM- and GM2-compatible tone generators.

CAF   Channel Aftertouch messages.

When you select "Note", a FROM NOTE and TO NOTE field appear that allow you to set the upper and lower limit of the notes to be copied. (See also "Fine-tuning the setting range" on p. 132.)

■VALUE (CPT) (–4800~4800)

This parameter sets the amount by which the notes are shifted. The value refers to CPT units (one CPT= 1/120 ♩). Notes on the first beat of the first bar cannot be shifted further to the left, because that would mean shifting them to the "0" measure, which doesn't exist.

■EXECUTE

Press this field to confirm your settings and edit the data.

TRACK XCHANGE

TRACK EXCHANGE allows you to move the data of the source track (left) to the destination track (right) and –at the same time– the data of the destination track to the source track.

■TRACK (1~16)

This is where you select the first track to be exchanged. Obviously, there is no ALL option here.

■TRACK (1~16)

This is where you select the second track to be exchanged. Obviously, there is no ALL option here. This track cannot be set to the same number as the above.
Note: Be careful when exchanging a drum track and a "melodic" track. The result may not be what you had in mind.

Editing the Master Track

The E-60/E-50's sequencer uses one track called "MASTER" for each song. It is used for recording the time signature, the tempo, as well as general SysEx messages that apply to all song tracks.

Note: You can only edit the MASTER track of songs that already exist, so be sure to record or load a song beforehand.

(1) If necessary, select a (different) song.
This is not necessary if you want to edit the song you have just recorded or played back. See "Working with the Song Finder" on p. 110 (or page 35) for how to load a song.

(2) Press the 16-TRK SEQ. button.
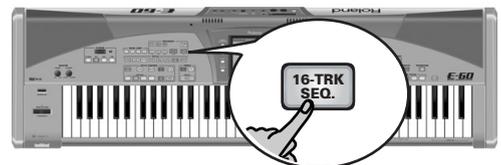
The display changes to:
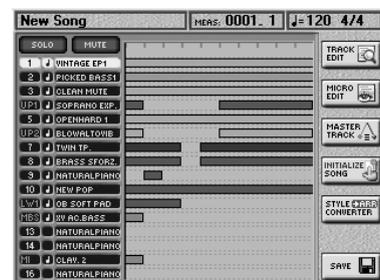
(3) Press the MASTER TRACK field in the right column.
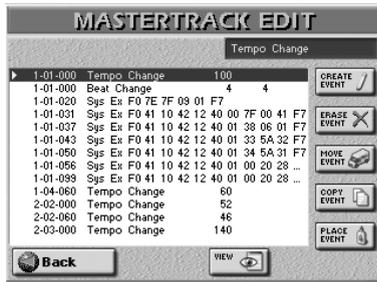
This page lists all events already present on the MASTER track. It allows you to modify the existing data, to delete data you do not need and to add information that is missing.

To avoid unpleasant surprises, be sure to save your song before editing the MASTER track.

Note: To leave this page, either press the Back field (return to the sequencer's main page) or the EXIT button (return to the E-60/E-50's main page).

Editing existing events

The MASTER track of each Standard MIDI File contains at least the following information:

Tempo: This is the "Tempo Change" value located at 1-01-000. It cannot be erased.

Time signature: This is the "Beat Change" value located at 1-01-000. It cannot be erased.

SysEx: The "SysEx" string located close to the beginning of the song. It tells the sound source what format is being used, how the effects processors should be set (types, parameter settings), etc.

Song length: The "End of Data" value refers to the position of the last event (which can be located on any track) and thus to the end of the song. This value cannot be edited manually. You can, however, extend the song by recording additional data or by inserting blank measures (page 134).

To change information already available on the MASTER track, proceed as follows:

(1) Use the ▲▼ buttons or the DATA/ENTRY dial to select the list entry you want to edit.
The name of the selected parameter appears in the upper right-hand corner of the display:
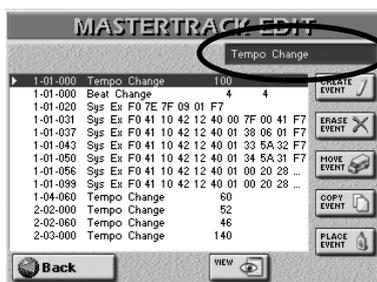
(2) Press the DATA ENTRY ▶ button to select the (first) value.
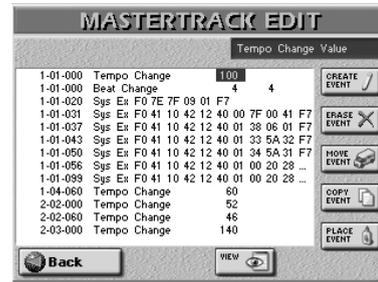
(3) Modify the value:
- Rotate the DATA/ENTRY dial. —or—
- Set the value using the DEC/INC buttons. —or—
- Press the DATA/ENTRY dial and enter the value using the numeric pad that appears in the display.

If you choose to work with the numeric pad, proceed as follows:
- Press Delete to clear the currently selected figure (e.g. the "7" of "127").
- Press the +10% or –10% field to increase or decrease the current value by 10%.
- Press ENTER to confirm the value.
—or—
Press CLOSE to close the numeric pad window without changing the value.

The parameters you can change are:

■**Tempo Change (BPM)**
(20~250) Specifies the song tempo. If necessary, you can insert tempo changes anywhere within the song. This could even be done in real time (using the TEMPO REC SW parameter). See page 126.

■**Beat Change (Numerator/Denominator)**
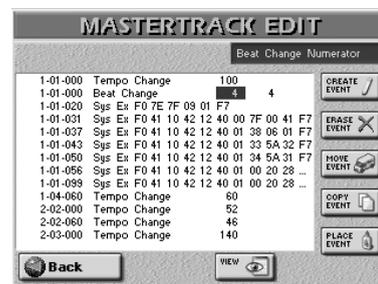
(Numerator: 1~32/Denominator: 2, 4, 8, 16) Specifies the song's time signature. If necessary, you can insert time signature changes anywhere within the song. After pressing ▶ for the first time, you can specify the numerator (the number of beats per bar). Press it again to specify the denominator (the note value of each beat).

■**SysEx**

After selecting a "SysEx" line and pressing ▶, the display looks more or less as follows:

```
        MASTERTRACK EDIT
        SYSTEM EXCLUSIVE EDIT
F0 41 10 42 12 40 01 00 20 28 63 29 20 4D 49 44
49 20 53 4F 4E 47 53 20 5E F7          AUTO SUM

                                       DELETE ✕
 1    2    3    A    B
                                       INSERT
 4    5    6    C    D                  F0 2A 10..

 7    8    9    E    F                  SEND
                                       F0 2A 10..▶
 0
              ◯ EXECUTE                CLOSE ▤
```

Use the ◀▶ buttons to select a byte (a pair of numbers) in the current line and ▲▼ to change lines.

"SysEx" refers to messages only the E-60/E-50 (or another GS-compatible sound source) understands. Changing these values requires a thorough understanding of the purpose and structure of SysEx messages.

Here are some guidelines, however:

• SysEx messages are usually found in the fine print of an owner's manual. If not, the distributor (or dealer) can supply a copy of that information.

• SysEx messages need to be entered in hexadecimal format – hence the A~F fields that are considered numbers. ("Hexadecimal" means that each group contains 16 different numbers rather than 10.) "41" in hexadecimal notation actually represents the number "65" in decimal notation [(4 x 16) + (1 x 1)].

• SysEx messages always start with "F0" (to signal the beginning of such a message) and end with "F7" (end of exclusive message).

• Some manufacturers (like Roland) use a byte that allows the user to check whether the SysEx message is correct. That byte is called the "checksum". If you don't know how to calculate that value, press the AUTO SUM button icon to have the E-60/E-50 insert it for you.
This is a very important step for Roland tone generators. If the checksum is wrong or missing, the entire string will be ignored.

Note: *The checksum is only calculated for SysEx strings of a certain length (more than 7 bytes).*

• Use the 0~9 and A~F fields to enter the value for the selected (white-on-black) byte. ("A" stands for 10, "B" for 11, "C" for 12, "D" for 13, "E" for 14, and "F" for 15.)

• Press the DELETE field to remove the selected byte. All subsequent bytes will move one position to the left.

• Press the INSERT field to insert "00" at the current position. The originally selected byte –and all subsequent bytes– move one position to the right. You can then replace the inserted "00" with the value you need.

• Press the SEND field to transmit the SysEx string in its current state to the tone generator.
This allows you to check the result before confirming it.

• Press the EXECUTE field to confirm your settings. Press CLOSE if you don't want to use the SysEx message after all.

By pressing EXECUTE or CLOSE, you return to the MASTER TRACK EDIT page.

```
        MASTERTRACK EDIT
                          Tempo Change
▶ 1-01-000  Tempo Change      100        CREATE
  1-01-000  Beat Change       4    4     EVENT ✓
  1-01-020  Sys Ex F0 7E 7F 09 01 F7
  1-01-031  Sys Ex F0 41 10 42 12 40 00 7F 00 41 F7  ERASE
  1-01-037  Sys Ex F0 41 10 42 12 40 01 38 06 01 F7  EVENT ✕
  1-01-043  Sys Ex F0 41 10 42 12 40 01 33 5A 32 F7
  1-01-050  Sys Ex F0 41 10 42 12 40 01 34 5A 31 F7  MOVE
  1-01-056  Sys Ex F0 41 10 42 12 40 01 00 20 28 ..  EVENT
  1-01-099  Sys Ex F0 41 10 42 12 40 01 00 20 28 ..
  1-04-060  Tempo Change      60         COPY
  2-02-000  Tempo Change      52         EVENT
  2-02-060  Tempo Change      46
  2-03-000  Tempo Change      140        PLACE
                                         EVENT
 ◯ Back              VIEW ◉
```

Press Back to return to the 16-track Sequencer's main page – or bear with us...

> **Other edit operations**

You probably noticed the fields in the right half of the MASTER TRACK EDIT page. They allow you to reduce or expand the number of events of the MASTER track.

■**VIEW**

Press this button icon if the list of MASTER track events has become so long that finding the events becomes a little difficult.

The following pop-up appears:

```
▶          VIEW SELECT            ⬚
    ■  TEMPO       ■  SYSTEM      ✕
                      EXCLUSIVE
    ■  BEAT                       ⬚
12-
                                  ⬚
    ALL ✓   NONE ✕    CLOSE ▤
                              PLACE
```

• Switch on the button icons of the events you want to see in the list (the indicator in question must light). TEMPO refers to tempo events, BEAT to time signature changes, and SYSTEM EXCLUSIVE to SysEx messages.

• Press ALL to switch on all button icons or NONE to switch them all off, in which case the MASTER TRACK EDIT list only contains the "End of Data" message.

• Press CLOSE to close the pop-up window without applying your changes. Press EXECUTE to close the pop-up window and use your changes.

■**CREATE EVENT**

Press this button icon to add a new event to the MASTER track. The following pop-up appears:

- Press the button icon that corresponds to the kind of event you want to add.
  TEMPO refers to tempo events, BEAT to time signature changes, and SYSTEM EXCLUSIVE to SysEx strings.

- Specify where your new event should be inserted by pressing the BAR field and entering the desired value using the DATA/ENTRY dial or the DEC/INC buttons.

- Press the EXECUTE field to confirm your settings. Press CLOSE to close the pop-up window without applying your changes.

■**ERASE EVENT**

- Use the DATA/ENTRY dial to select the event you want to delete.

- Press the ERASE EVENT field to erase the selected event.
  Note: Tempo and time signature events located at "1-01-00" cannot be erased.

■**MOVE EVENT**

This function allows you to move one or several events.

- Select the event you want to move. To move several events, it would be a good idea to select the first or last event of the series.
  Note: For this function, you could take advantage of the VIEW filter to avoid selecting event types that should remain where they are. See "VIEW" on p. 141.
  Note: Tempo and time signature events located at "1-01-00" cannot be moved.

- To select several consecutive events, press the DATA/ENTRY dial while turning it towards the left (upward direction) or the right (downward direction). All events selected in this way appear on a dark background.

- Press the MOVE EVENT button icon. The following pop-up appears:

- Specify the position to which the first event (in chronological order) of the selected group should be shifted by pressing the BAR, BEAT and CPT fields, and entering the desired value for each unit using the DATA/ENTRY dial or the DEC/INC buttons.

- Press the EXECUTE field to confirm your settings and move the event(s).
  Press CLOSE to close the pop-up window without applying your changes.

■**COPY EVENT**

This function allows you to copy one or several events. Use PLACE EVENT to insert a copy of those events at the desired position.

Note: For this function, you could take advantage of the VIEW filter to avoid selecting event types that should not be included in the copy. See "VIEW" on p. 141.

- To select several consecutive events, press the DATA/ENTRY dial while turning it towards the left (upward direction) or the right (downward direction). All events selected in this way appear on a dark background.

- Press the COPY EVENT button icon.
 Each new selection will replace the previous one. See also below.

■PLACE EVENT

This function is only available if the sequencer's clipboard already contains events that you copied using COPY EVENT. For safety reasons, it would be a good idea to use this function immediately after copying events.

Press the PLACE EVENT button icon. The following pop-up appears:

- Specify the position where the first event should be inserted by pressing the BAR, BEAT and CPT fields and entering the desired value for each unit using the DATA/ENTRY dial or the DEC/INC buttons.

- Press the EXECUTE field to confirm your settings and paste the new event(s).

  Press CLOSE to close the pop-up window without applying your changes.

  Note: Events inserted with PLACE EVENT are added to any events that may already exist in that area. Existing events are thus not pushed towards the end of the song.

Editing song data using Microscope Edit

Select this mode whenever you only need to change small details of an otherwise perfect Standard MIDI File.

In this section, we will use the word "event" for any kind of message.

You can only view and edit one track at a time. Therefore, be sure to check the TRACK setting before editing the events displayed on this page.

(1) Select and load a (different) song.

This is not necessary if you want to edit the song you have just recorded or played back. See "Working with the Song Finder" on p. 110 (or page 35) for how to load a song.

(2) Press the 16-TRK SEQ. button.
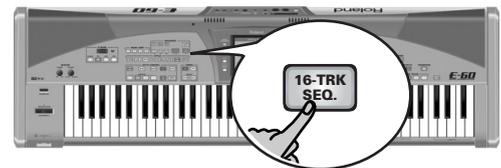
The display changes to:
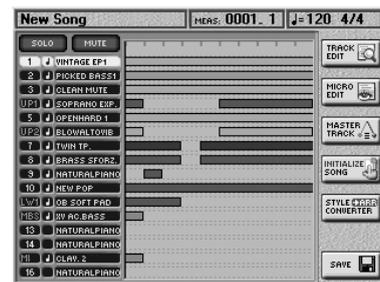
(3) Press the MICRO EDIT field in the right column.
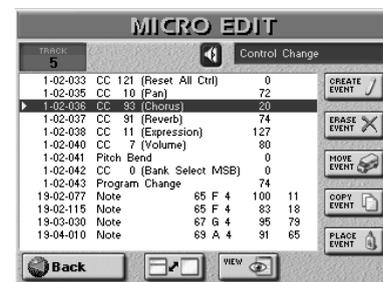
(4) Press the TRACK field and use the DATA/ENTRY dial or the DEC/INC buttons to select the track you want to edit.

(5) Press the white field (the event list) to be able to select events using the DATA/ENTRY dial and ▲▼ buttons.

General notes about MICRO EDIT
■Position indications
The E-60/E-50's sequencer translates all known musical techniques and physical effects into MIDI messages to precisely reproduce the natural behavior of the instrument that is being simulated.

Each event is executed at a given point in time, which is why they all have a position indication ("1-01-119", for example). The first figure refers to the bar, the second to the beat within that bar and the third to the clock (CPT) between the current beat and the next. For a 4/4 time signature, each beat comprises 120 clocks. The example cited earlier actually means that the event is located immediately before the second beat.

■Graphic representation of your data (piano roll)
To get a better idea of where your data are located and how they are distributed, press the ▭✎▢ field. The display then changes to:

Except for a (perhaps) clearer representation of the data on the selected track, all other operations are the same as in standard view. Press ▭✎▢ again to see more values again.

■Monitoring note events
The 16-track Sequencer can play back note events you select. This may help you identify the occurrence you want to edit. Press the speaker icon (◀) to switch this monitor function on and move the cursor to a note event to sound that note.

Note: See also the remark after step (1) on the next page.

■VIEW
Press this button icon if the list has become so long that finding the events you wish to edit takes too long or to ensure that only the event types you need can be selected.

The following pop-up appears:

- Switch on the button icons of events you want to see in the list (the icons in question must light).

CONTROL CHANGE also includes the bank select messages (CC00 and CC32) that are used for selecting sounds (along with the program change numbers that can be filtered separately).

- Press ALL to switch on all button icons or NONE to switch them all off, in which case the MICRO EDIT list only contains the "End of Data" message.
- Press CLOSE to close the pop-up window.

■General procedure
To change information already available on the selected track, proceed as follows:

(1) Use the ▲▼ buttons or the DATA/ENTRY dial to select the list entry you want to edit.
The name of the selected parameter appears in the upper right-hand corner of the display:
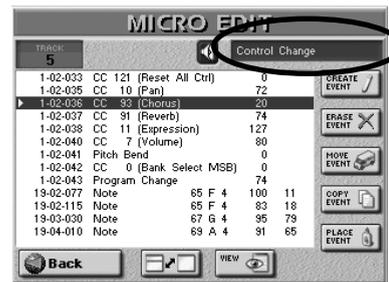
> After selecting the entire line of a note event, you can press and hold the DATA/ENTRY dial to play the note (it will be held until you release the DATA/ENTRY dial). If you press the DATA/ENTRY dial after selecting another kind of event (control change, aftertouch, program change, etc.), that value is buffered by the E-60/E-50's tone generator, and used for the following note event you play back. To change that information, select another occurrence (with a different value) and press the DATA/ENTRY dial yet again.

(2) Press the DATA ENTRY ▶ button to select the (first) value.

(3) Modify the value:
- Rotate the DATA/ENTRY dial. —or—
- Set the value using the DEC/INC buttons. —or—
- Press the DATA/ENTRY dial and enter the value using the numeric pad that appears in the display.

If you choose to work with the numeric pad, proceed as follows:

• Press the numeric button icons to enter the desired value. (Use ⌈Delete⌋ to delete the last figure you entered.)

• Press the ⌈+10%⌋ or ⌈–10%⌋ field to increase or decrease the current value by 10%.
• Press ⌈ENTER⌋ to confirm the value.
—or—
Press ⌈CLOSE⌋ to close the numeric pad window without changing the value.

(4) Press the DATA ENTRY ▶ button to select the next value and change it.

(5) When you're done, press the ⌈Back⌋ field to return to the main Sequencer page and save your song.

The parameters you can change are:

● Note and velocity messages—These messages always come in pairs (see the illustration of step (2) above). The first value ("Note Number 127 G9") refers to the note itself and the second ("On Velocity 127") to the velocity (playing dynamics).
The MICRO EDIT page adds a third message to that pair ("65535"). It describes the duration of the note in question. You may remember this value from the TRACK EDIT environment, where it is called "**Gate Time**".

● Control Change—These messages usually add something to the notes being played, like modulation, a different volume, a new stereo position… The E-60/E-50 recognizes all available control change numbers (CC00~127) and displays their "official" name wherever possible (not all control change numbers have universally accepted functions). The value can be set between "0" and "127".

● Program Change—These messages are used for selecting sounds within the current bank (1~128).

● Pitch Bend—These messages are used for temporary changes to the pitch of the notes being played at that time. Pitch Bend messages can be positive (higher) or negative (lower). Setting range: –128~128.

● Poly Aftertouch—This refers to aftertouch messages the E-60/E-50 does not generate. Its sound source recognizes them, however. The difference between polyphonic aftertouch and channel aftertouch is that the former is related to a single note, while the latter applies to all the notes the track is currently playing.

● Channel Aftertouch—See above.

Editing events
■Editing Pitch Bend messages
Pitch Bend messages can be positive or negative (the range is –128~128). The value "0" means that the pitch of notes being played in that area is not altered.

If a Pitch Bend occurrence is not reset to "0" at some stage, all notes will keep sounding flat when you no longer want them to.

■Editing control changes and aftertouch messages
These messages (CC, Poly Aftertouch and Channel Aftertouch) can be set to the desired value (0~127) when the corresponding effect is needed – but they also need to be reset to "0" to avoid unpleasant surprises.

The E-60/E-50's keyboard does not generate Poly or Channel Aftertouch messages, but its sound source understands them. Poly Aftertouch messages are always related to a given note, which is why you first need to tell the sequencer which note the event applies to: "0 (C–)"~"127 (G9)". Next, specify the desired Aftertouch value (0~127).

■About the "Note" messages
As stated above, note messages comprise a note number, a velocity value and a Gate Time value.

The range for note numbers is "0 (C–)"~"127 (G9)". Velocity messages can be set anywhere between "1" (extremely soft) and "127". The value "0" cannot be entered, because it would effectively switch off the note.

After selecting the Gate Time entry, pressing the ⌈DATA/ENTRY⌋ dial calls up the following pop-up:

Here, you can either set the required length as a CPT value (♩= 120CPT) or use the note icons to avoid lengthy calculations. The maximum duration a note event can have is 65,535 clocks.

Drum parts usually use the Gate Time value "1" for all notes. Increasing it to "20", for example, has no audible effect on the sound durations.

Other edit operations

The fields in the right half of the MICRO EDIT page allow you to reduce or expand the number of events of the track you selected.

■CREATE EVENT

Press this button icon to add a new event to the selected track. The following pop-up appears:

> If the position for which you create a new event already contains other events, the new event is added at the end of that group.

• Press the button icon that corresponds to the kind of event you want to add.
  Here are the default values of the events you create:

                Note: Note Number: 60 C4
                      On Velocity: 100
                      Gate Time: 60

        Control Change: CC01 Modulation, value "0"

    Program Change*: Program Change Number "1"

              Pitch Bend: "0"

      Poly Aftertouch: Note Number: 60 C4
   Poly Aftertouch Value: "0"

   Channel Aftertouch: "0"

[*] "Control Change" also allows you to insert Bank Select messages (CC00 and CC32). Such messages must be located BEFORE the program change to which they apply. The correct order is: CC00→ CC32→ PC. Also, it is usually wiser to assign these three values to consecutive CPT positions.

• Specify the position where your new event should be inserted by pressing the BAR, BEAT and CPT fields and entering the desired value for each unit using the DATA/ENTRY dial or the DEC/INC buttons.
• Press the EXECUTE field to confirm your settings and add the new event.
  Press CLOSE to close the pop-up window without applying your changes.

Adding notes

If you press the NOTE field, the display changes to:

This pop-up window allows you to enter up to 10 notes for each position (see the BAR, BEAT CPT fields). The velocity values of the keys you press are also adopted.

• To enter chords: press and hold the key of at least one constituent note, then press the remaining keys. Any key you press after releasing the keys of notes already entered in the "table" replaces the "old" notes.
• Press one of the note icons to specify the duration of the note(s) shown in the "table". This is possible both before and after playing the required note(s) on the keyboard.
• Press the EXECUTE field to confirm your settings and add the new note (or chord).

■ERASE EVENT

• Use the DATA/ENTRY dial or the ▲▼ buttons to select the event you want to delete.
• To select several consecutive events, press the DATA/ENTRY dial while turning it towards the left (upward direction) or the right (downward direction).
• Press the ERASE EVENT button icon to remove the event you selected.

■MOVE EVENT

This function allows you to move one or several events.

Note: If the position to which you move the selected event already contains other events, the moved event is added at the end of that group.

• Select the event you want to move.
  Note: For this function, you could take advantage of the VIEW filter to avoid selecting event types that should remain where they are. See "VIEW" on p. 144.
  Note: Events located at "1-01-00" cannot be moved further to the left.
• To select several consecutive events, press the DATA/ENTRY dial while turning it towards the left (upward direction) or the right (downward direction). All events selected in this way appear on a dark background.

• Press the MOVE EVENT button icon. The following pop-up appears:

• Specify the position to which the first event (in chronological order) of the selected group should be shifted by pressing the BAR, BEAT and CPT fields, and entering the desired value for each unit using the DATA/ENTRY dial or the DEC/INC buttons.
• Press the EXECUTE field to confirm your settings and move the event.
Press CLOSE to close the pop-up window without applying your changes.

■ **COPY EVENT**

This function allows you to copy one or several events. Use PLACE EVENT to insert a copy of those events at the desired position.

Note: For this function, you could take advantage of the VIEW filter to avoid selecting event types that should not be included in the copy. See "VIEW" on p. 141.

• To select several consecutive events, press the DATA/ENTRY dial while turning it towards the left (upward direction) or the right (downward direction). All events selected in this way appear on a dark background.
• Press the COPY EVENT button icon.
Each new selection will replace the previous one.

■ **PLACE EVENT**

This function is only available if the sequencer's clipboard already contains events that you copied using COPY EVENT. For safety reasons, it would be a good idea to use this function immediately after copying events.

Press the PLACE EVENT button icon. The following pop-up appears:

• Specify the position where the first event you copied should be inserted by pressing the BAR, BEAT and CPT fields, and entering the desired value for each unit using the DATA/ENTRY dial or the DEC/INC buttons.
• Press the EXECUTE field to confirm your settings and add the new event(s).
Press CLOSE to close the pop-up window without applying your changes.

Note: Events inserted with PLACE EVENT are added to any events that may already exist in that area. Existing events are thus not pushed towards the end of the song.

Style Converter

The E-60/E-50's Style Converter is an easy and intuitive tool for creating your own Music Styles based on one of your own songs or a Standard MIDI File created by someone else. In either case, it is enough to play back the Standard MIDI File once to transfer its data to the E-60/E-50's song RAM memory where you can use the Style Converter. You may want to edit the song before converting parts of it into a Music Style. See "Editing one or several tracks (TRACK EDIT)" on p. 129 and "GLOBAL CHANGE" on p. 137 for details.

General considerations

Here are a few guidelines for converting song parts to a Music Style:
• See "Concept" on p. 151 and "Looped vs. one-shot patterns" on p. 151 for the different pattern types.
• The Music Style created using the Style Converter can be used in Arranger mode (not in 16-track Sequencer mode).
• Music Styles are accompaniment patterns. If the new Style should be generally usable (i.e. for any song of a given genre), try avoid chord changes in the "basic" patterns (MAIN 1~4). Remember that you can transpose your Styles in realtime by playing different chords in the chord recognition area. Also, it is usually wiser not to include the melody in your conversion.
• Try to isolate the passages and parts that are really typical of the song.
• Transitions, rolls, etc., should be converted to Fill-Ins. The intro should be converted to an Intro pattern.

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• For a really professional result, you will also have to take advantage of the E-60/E-50's Style Composer to ensure that your new Style also "works" for minor and seventh chords. See "Programming Styles (Style Composer)" on p. 151.

• Though pattern length (and memory capacity) is no issue, try to work in small but meaningful units. Here's an example: most songs rely on a structure based on 4-measure blocks. Converting 6 measures is thus a bit odd (though perfectly possible).

• Prepare a simple pattern for MAIN [1] and increasingly complex accompaniments for the remaining patterns.

• Always set the correct KEY (page 150). Only then will the Style really work as expected when used with the E-60/E-50's Arranger.

• Your new Style resides in the E-60/E-50 Style RAM memory. Do not forget to save it *before selecting* another Style (in Arranger mode) or switching off the E-60/E-50.

> Commercially available Standard MIDI Files are protected by a copyright. Please note that the Style Converter should only be used to create Music Styles for private use. Roland assumes no responsibility for copyright infringements that may result from the use of the Style Converter.

Using the Style Converter

(1) Select and load a (different) song.

This is not necessary if you want to use the song you have just recorded or played back. Otherwise, see "Working with the Song Finder" on p. 110 (or page 35) for how to load a song.

In any case, you should listen to it and try to isolate the eight tracks whose parts should be included in your new Music Style.

(2) Press the RECORDER [16-TRK SEQ.] button.
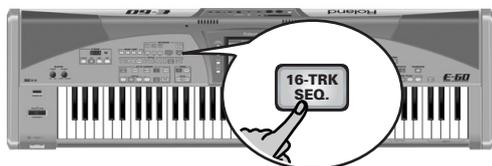
The display changes to:
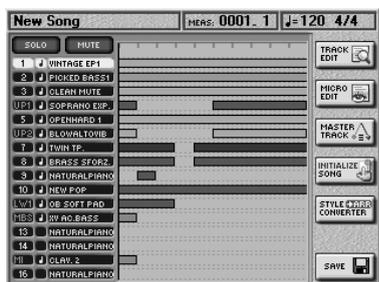
(3) Press the [STYLE CONVERTER] field in the right column.

(4) You may also have to press the [SETUP] button icon to select the page shown above (if "CONVERT" is currently active).

This page allows you to select the song tracks that should become Style tracks. Remember that a song may contain up to 16 tracks, while a Music Style "only" provides eight.

The default assignments of song tracks to the Style tracks (see the illustration above, last column in the list) are made automatically. Though based on common sense, they may not yield the desired accompaniment pattern. As a rule, you should always listen carefully.

(5) To correct one or several of the default assignments, proceed as follows:

• Press one of the display fields to select the Style track.

Those are the tracks that make up your Music style to be.

• Next, use the [DATA/ENTRY] dial or the [DEC]/[INC] buttons to select a song track in the list to the left.

Note: See "Arranger parts" on p. 60 if you're not sure what the abbreviations in the "Trk" fields stand for.

Note: If you assign several song tracks to the same Style track, a bullet ("●") appears next to the Style track name in the table to indicate that the Style track in question is already assigned to another song track. (Though this is perfectly possible, the result is usually not convincing.)

If necessary, press the [INIT VALUE] field to return to the default assignments if that produces the best result after all.

Auditioning the tracks

Press the [Jump to 1st note] field to jump to the first note of the selected song track (the one that appears on a dark background). Playback starts automatically from that point and you will hear all song tracks. Press the RECORDER [PLAY/STOP ►/■] button to stop playback (or to start it again).

Note: If the selected track contains no data at all, playback is started from the very first song measure.

■ Muting tracks

Sometimes, it may be necessary to mute certain parts so as to concentrate on what the other tracks do, and to decide which tracks should be converted into a Music Style. To do so, press the [MUTE] field and then the lines of the song tracks you don't want to hear. Such tracks are flagged with an "M".

Press the MUTE field again to switch off the function of the same name.

■**Solo**

To listen to one track in isolation, press the SOLO field and the field of the track you want to solo, then start playback. This mutes all other tracks, while the selected track is flagged with an "S".

Press the SOLO field again to switch off the function of the same name.

(6) Press the CONVERT field to jump to the following page.

Here, you can listen to the selected tracks, specify which excerpt should be extracted and set the patterns that should contain the selected data. The most logical order for proceeding is as follows:

(7) Press the RECORDER TOP ◄ button, followed by PLAY/STOP ►/■ to start song playback.
FWD and BWD are also available for rewinding and fast-forwarding.

(8) While listening to the song, press the MARK A field at the beginning of first measure to be converted, and MARK B when the E-60/E-50 reaches the last measure you need.
Alternatively, you can stop playback, press the FROM A or B "display" field and enter the measure number with the DATA/ENTRY dial or the DEC/INC buttons.

(9) Stop playback by pressing PLAY/STOP ►/■.

(10) Switch on the LOOP button icon.
This function allows you to listen to the selected excerpt (between A and B) repeatedly.

That way, you can check whether the last notes of your pattern-to-be allow for a smooth transition to other Music Style patterns, or sound natural when the pattern is repeated. Sometimes, quantizing the last few notes of an excerpt may be helpful to avoid including notes that were played a little ahead of the beat (and therefore sound on the last beat you convert). See page 130 for details.

(11) Press the RECORDER PLAY/STOP ►/■ button to start playback.
The selected passage is repeated over and over until you stop playback.

(12) If necessary, use the MUTE and SOLO fields to temporarily switch off or isolate certain tracks.
This is only for checking purposes. The on/off status does not affect the selection that will be converted.

Initializing the Style RAM memory

The INITIALIZE STYLE field on this page is usually used only once: before converting the first song tracks. If you don't use this field, the tracks you convert are added to the Style data already present in the E-60/E-50's Style RAM area. If you need to start from scratch, however (to create an entirely new Style)…

• Press the INITIALIZE STYLE field.

• Press the TEMPO and use the DATA/ENTRY dial or the DEC/INC buttons to enter the desired value.

• Press the two TIME SIGNATURE fields (one after the other) and use the DATA/ENTRY dial or the DEC/INC buttons to enter the desired value.
Note: This is your first and last chance to specify the new Style's time signature. The only way you can do this is by initializing the Style RAM area. So be sure to set this value before your very first conversion. (The Style's time signature can also be changed using the Style Composer, however, but that forces you to change modes.)

• After setting everything to your liking, press the EXECUTE field to initialize the Style RAM area. (Press CLOSE to leave this page without initializing the data in RAM.)
This takes you back to the "CONVERT" page:

(13) Now select the destination pattern, i.e. specify whether the selected excerpt should become a MAIN pattern, an Intro, etc.

(14) Press the available "display" fields and use the DATA/ENTRY dial or the DEC/INC buttons to enter the desired value.
The parameters discussed below can be set for each track and pattern individually. Though flexible, this system also means that you need to be careful so as to achieve usable results.

● **Key**—(C, C♯, D, E♭, F, F♯, G, A♭, A, B♭, B) Use this parameter to tell your E-60/E-50 what key the track (or tracks) is (or are) in. Specifying the right key before converting the data is crucial for realtime use of a pattern. The chord recognition system of the Arranger is indeed based on the assumption that all patterns are in the key of C. Thus, whenever you play a C (in INTELLIGENT mode) or a C chord in the chord recognition area, the E-60/E-50 uses the original notes of the pattern (no realtime transposition). If that pattern is in F♯ and if you forgot to tell the E-60/E-50 that it is, F♯ is what you will hear when you play a C or C chord.

Note: There is no need to specify the key for ADR tracks.

● **Tempo (20~250)**—Allows you to specify the default tempo of the Music Style.

● **Track (ADrum, ABass, ACC1~6, ALL)**—This is where you can specify the tracks that should be extracted and turned into a Music Style phrase. In most instances, you will probably select "ALL". You could, however, also extract each track separately.

● **Mode**—Allows you to select the mode of your pattern: "Major" (major), "m" (minor) or "7th" (seventh). Choose the mode that matches the chord being used in the excerpt. You can also decide to use the same phrase for all three modes. The E-60/E-50 then attempts to transform them in a musically useful way for the chords you play in realtime. By selecting an option indicated by "=", you create several patterns at once, see also p. 154.

● **Division**—Allows you to specify the pattern type that should be created: Main 1, Main 2, Main 3, Main 4, Main ALL, Fill Up1, Fill Up2, Fill Up3, Fill Up ALL, Fill Dw1, Fill Dw 2, Fill Dw 3, Fill Dw ALL, Intro 1, Intro 2, Intro 3, Intro 4, Intro ALL, End 1, End 2, End 3, End 4 or Ending ALL.

■EXECUTE

(15) After setting everything to your liking, press this field to launch the conversion.

If you don't want to convert the Standard MIDI File phrases into a Music Style, press the [Back] field to return to the 16-track Sequencer's main page.

(16) Now save your Music Style:

• Press the [DISK & MEDIA] button.

The display changes to:

• Press [SAVE], followed by [STYLE].

This page allows you to save the current Style to the internal memory, a memory card or a floppy disk.

• Press the [INTERNAL MEMORY], [EXTERNAL MEMORY], or [FLOPPY] field to select the area where you want to save the Music Style.

• Enter the name for the file.
See page 44. If necessary, you can also supply the required COUNTRY and GENRE information for use with the STYLE FINDER function.

Note: The E-60/E-50 supports both upper- and lower-case letters for file names. Choose whichever is more convenient (or clearer).

(17) Press the [EXECUTE] field to save the data.
If the selected memory area already contains a Music Style of that name, you are asked whether it is OK to overwrite it.

• Press the [YES] field to overwrite the file. This replaces the Music Style in question with the new version.

• Press the [NO] field to return to the SAVE STYLE page, change the name, then press [EXECUTE] again.

(18) Press the [EXIT] button to return to the main page.

14. Programming Styles (Style Composer)

Concept

New Styles can be created in three ways:

- By converting portions of a Standard MIDI File into an accompaniment to be played by the Arranger (page 147).
- By creating new accompaniments from scratch (page 152).
- By editing existing Styles, which requires that you copy them and then alter the settings or notes you do not like (page 158).

Patterns (Divisions)

Styles are short sequences, or *patterns* (of four or eight measures) you can select in realtime. If you have ever worked with a drum computer or groove box, the pattern concept may sound familiar. Pattern-based accompaniments usually consist of the following elements:

- The basic *groove*, i.e. the rhythm that is the backbone of the song.
- Several alternatives for the basic groove that keep the accompaniment interesting and suggest some kind of "evolution" or "variation".
- Fill-Ins to announce the beginning of new parts.
- An introduction and a closing section (ending). Programming four to eight patterns for a three-minute song is usually enough. Just use them in the right order to make them suitable for your song.

  The E-60/E-50 allows you to program 54 different patterns per Style, some of which can be selected via dedicated buttons (MAIN [1]~[4], etc.). Some Patterns are selected on the basis of the chords you play in the chord recognition area of the keyboard (major, minor, seventh).

Tracks

Unlike a drum machine, a Style not only contains the rhythm part (drums & percussion) but also a melodic accompaniment, such as piano, guitar, bass and strings lines. That is why the Styles work with *tracks* – eight to be precise. See also "Arranger parts" on p. 60.

The part-to-track assignment is fixed. You cannot assign the AccDrums part to track 6, for example.

The reason why the AccDrums part is assigned to the first track and the ABass part to the second is that most programmers and recording artists start by laying down the rhythm section of a song.

There are exceptions to this rule, however, so feel free to start with any other part if that is easier for the Style you are programming.

Note: Though there are six (melodic) ACC tracks, most Styles only contain two or three melodic accompaniment lines. In most cases, less means more, i.e. do not program six melodic accompaniments just because the E-60/E-50 provides that facility. If you listen very carefully to a CD, you will discover that it is not the number of instruments you use that makes a song sound "big" but rather the right notes at the right time.

Looped vs. one-shot patterns

The E-60/E-50 uses two kinds of patterns: looped divisions and one-shot divisions.

■ Looped divisions

Looped divisions are accompaniments that are repeated until you select another division or press START/STOP to stop Arranger playback. The E-60/E-50 provides four programmable looped divisions (MAIN [1]~[4]).

Looped divisions do not select other divisions when they are finished (because they never end): they keep playing until you select another division by hand (or by foot).

■ One-shot divisions

One-shot patterns (or "Divisions") are only played once and then select a looped division or stop the Arranger. The E-60/E-50 uses the following one-shot divisions: INTRO [1]~4, FILL UP [1]~[3], FILL DOWN [1]~[3] and ENDING [1]~[4].

The division type also determines how the respective tracks are played back. Any track of a looped pattern that is shorter than another track is repeated until the longest track is finished. Then, a new cycle begins.

Here's how you can take advantage of that: if the drums play the same notes during four measures, while the rhythm guitar or piano needs four measures to complete a cycle, recording only one drum measure is enough, because it is automatically repeated until the longest track is finished.

Recording Styles from scratch

Important remark

Style recording and editing is carried out in the E-60/E-50's Style RAM memory. When you leave Style Composer mode after recording or editing a Style (by pressing ⎡EXIT⎤), the display warns you that you need to save your Style. If you haven't yet done so, you should take advantage of this security system.

Press the ⎡YES⎤ field to save your Style (see page 157 for details) or ⎡NO⎤ if you think that is not necessary.

Starting the Style Composer

(1) Press the ⎡MENU⎤ button.

The display changes to:

(2) Press the ⎡STYLE COMPOSER⎤ field.

Clearing the RAM memory (Initialize Style)

The first thing we need to do is clear the E-60/E-50's Style RAM memory, because it is not empty when you select the STYLE COMPOSER.

(3) Press the ⎡INITIALIZE STYLE⎤ field in the right column.

The warning alerts you to the fact that pressing ⎡EXECUTE⎤ (see below) may have disastrous consequences. See "Saving your Style" on p. 157 if you still need to save your previous Style.

(4) If you want the E-60/E-50 to select suitable sounds for you, press one of the TEMPLATES fields.
Here is what the options mean:

ORCHESTR	Selects orchestral sounds suitable for classical music and film scores.
BAROQUE	Selects instrument sounds suitable for chamber music.
ROCK	Selects sounds suitable for rock music.
FOLK	Selects sounds suitable for folk music.
COUNTRY	Selects sounds suitable for country music.
ELECTRONIC	Selects sounds suitable for dance music.
POP	Selects sounds often used in pop arrangements.
JAZZ	Selects sounds suitable for jazz combos.
ETHNIC	Selects sounds suitable for world music.

→ If you want to set everything yourself, jump to "Preparing your own settings" below.

■**Time signature**
Before recording your first track, you must specify the time signature of your accompaniment. Select 4/4 for 8- or 16-beat patterns, 3/4 for waltzes, 2/4 for polkas and 6/8 (or 4/4) for marches. You can also select more complex time signatures (5/4, 7/4, etc.).

This value needs to be set when you initialize the Style RAM memory (i.e. now). *All Divisions and Modes use this time signature*. You could, however, edit the patterns at a later stage (see "TIME SIGNAT" on p. 169) and specify that MAIN ⎡1⎤ should use "4/4", MAIN ⎡2⎤ "6/8", etc.

(5) Set the time signature:
• Press the first ⎡BEAT⎤ field (the numerator) and enter the desired number of beats using the ⎡DATA/ENTRY⎤ dial or the ⎡DEC⎤/⎡INC⎤ buttons.

• Press the second BEAT field (the denominator) and enter the duration of each beat using the DATA/ENTRY dial or the DEC/INC buttons.
You can also already set the tempo (20~250) here, or leave that for later.
→ Continue with step (6) below.

■Preparing your own settings

If none of the templates matches the settings you need, press the MY SETUP field.

8 possibilities

Can be set for all 8 tracks
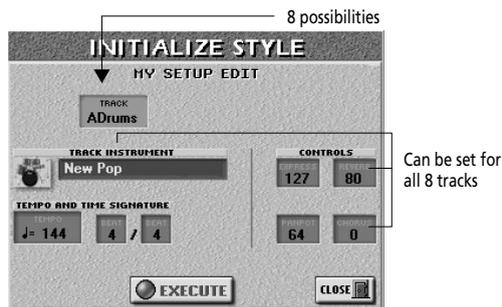
Here, you can prepare the STYLE COMPOSER for the work at hand by selecting the desired sounds and setting additional parameters.

Please proceed in the order given here until you have a firm grasp of the flexibility:

(a) Press the TRACK field and use the DATA/ENTRY dial or the DEC/INC buttons to select the track whose settings you want to change.
With the exception of the tempo, all parameters shown here only apply to the selected track. There are 8 tracks: ADrum (the drums), ABass (the bass) and Acc1~6 (melodic accompaniment parts).

(b) Press the TRACK INSTRUMENT field to jump to the TONE SELECT page. (You can also press a TONE button to assign the desired sound to the track.)
The AccDrums track can only use Drum Sets (so that only the DRUMS button of the TONE pad is available).

(c) Play a few notes on the keyboard to audition the sound.

(d) If necessary, change the CONTROLS settings by pressing their fields and using the DATA/ENTRY dial or the DEC/INC buttons.
The four fields refer to the following aspects:

EXPRESS   Temporary volume changes (CC11).

REVERB   Reverb Send (CC91), i.e. how strongly the selected track should be processed by the reverb effect.

PANPOT   The track's stereo placement (00[L]~64~127[R]).

CHORUS   Chorus Send (CC93), i.e. how strongly the selected track should be processed by the chorus effect.

These settings may come in handy to ensure that all ACC1 parts (for example) use the same amount of reverb and are always located in the right half of the stereo image. You can also change these settings later (see p. 161).

(e) Repeat steps (a)~(d) for the remaining tracks, Modes and Divisions.

(f) Press the first BEAT field (the numerator) and enter the desired number of beats using the DATA/ENTRY dial or the DEC/INC buttons.

(g) Press the second BEAT field (the denominator) and enter the duration of each beat using the DATA/ENTRY dial or the DEC/INC buttons.
See "Time signature" above. You can already set the tempo (20~250) here, or leave that for later.

(6) Press the EXECUTE field.
The display returns to the STYLE COMPOSER page, which only contains the sound assignments you have just made.


Getting ready for the first track

(7) On the STYLE COMPOSER page, press the DIVISION field and use the DATA/ENTRY dial to select the Division you want to record ("Intro", "Main", "Fill" or "Ending").

(8) Press the RECORDER REC ● button.


The display changes to:
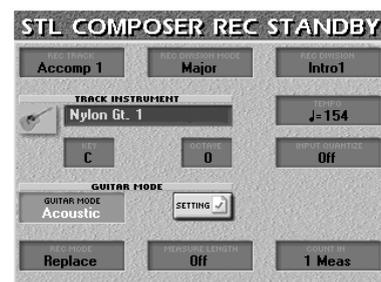
Selecting the track, the Mode and the Division

To keep things easy, let's start with the drums of the MAIN ① Division.

(9) Press the ⌈REC TRACK⌉ field and use the ⌈DATA/ENTRY⌉ dial to select the track you wish to record to.

Select "AccDrums". This causes the display to change as follows (because there are more options for drum tracks):

Now select a pattern. Let's start with MAIN ①:

(10) Press the ⌈REC DIVISION⌉ field and use the ⌈DATA/ENTRY⌉ dial to select "Main 1".

■Working with clones

On this page, you can use two clone functions that allow you to record one part and copy it to up to four Divisions and three Modes each. The "=" sign means that more than one pattern will be recorded.

(11) Use the ⌈REC DIVISION MODE⌉ field to select the mode(s).

This parameter allows you to specify whether you are about to record the accompaniment for major, minor or seventh chords. If you listen to the Styles prepared by Roland, you will notice that there are slight differences in the looped patterns – and sometimes striking differences for Intros and Endings, with completely different phrases. Such variations can be prepared using the REC DIVISION MODE parameter.

Let us use the following settings, which mean "record the major pattern and copy it to all MAIN Divisions". Thus, with one recording, you will obtain 3 (Major, minor, 7th) x 4 (MAIN 1, 2, 3, 4)= 12 identical drum patterns!

Tone selection

Another important aspect is sound selection because the addresses of the sounds and Drum Set you select are recorded at the beginning of each division.

(12) Press the ⌈TRACK INSTRUMENT⌉ field and select a Drum Set.

- Press a TONE button on the front panel and press the field of the desired sound. If you don't like it, press another field.

- If you are still not happy with the Tone, use the ⌈PAGE 1⌉~⌈PAGE 4⌉ and ⌈➡⌉ fields to select the corresponding page (if available).

Note: The AccDrums track can only use Drum Sets (so that only the ⌈DRUMS⌉ button of the TONE pad is available).

Play a few notes on the keyboard to check whether the sounds of the selected Drum Set are suitable for the accompaniment you are going to record. Try other Drum Sets until you find the one that sounds "right".

Note: See "Drum Instrument & Pitch" on p. 161 for details abut the NRPN DRUM and PITCH parameters. These are only available for ADrum tracks.

Specifying the key (for melodic parts)

If you want to use the accompaniment in a musically meaningful way, you need to tell the E–60/E–50 what key you are recording in. This is to ensure that the chords you play during everyday use of your Style with the E–60/E–50's Arranger lead to the correct realtime transpositions of the selected Division.

The E–60/E–50 allows you to record Styles in any key. But do set the KEY parameter to the right value before recording.

Note: The key of AccDrums parts cannot be set (because that doesn't make sense).

(13) Press the ⌈KEY⌉ field and use the ⌈DATA/ENTRY⌉ dial or the ⌈DEC⌉/⌈INC⌉ buttons to set the key.

If you want to record in F♯, set this parameter to "F♯"; to record in A, you must set this value to "A", etc.

■Octave

The field next to ⌈KEY⌉ allows you to transpose the keyboard in octave steps, which may be convenient for extremely high or low notes – or for using the special "noises" of certain sounds.

(14) Press the ⌈OCTAVE⌉ field and use the ⌈DATA/ENTRY⌉ dial to transpose the keyboard up or down (–4~+4 octaves).

Tempo

(15) The current tempo value may be a bit fast for recording, so change it by pressing the tempo field and using the $\boxed{\text{DATA/ENTRY}}$ dial or the $\boxed{\text{DEC}}$/$\boxed{\text{INC}}$ buttons.

The tempo value you set here is recorded and regarded as preset tempo. You can change it at any stage in STYLE COMPOSER mode, so start by selecting a tempo that allows you to record the music the way you want it to sound.

Input Quantize

INPUT QUANTIZE is a function that corrects minor timing problems. It shifts the notes whose timing is not exactly right to the nearest "correct" unit.

Always select a resolution value that is fine enough to accept all note values you play. If the shortest notes of your accompaniment are 1/16th-note triplets, set the INPUT QUANTIZE value to "1/16t".

(16) Press the $\boxed{\text{INPUT QUANTIZE}}$ field and use the $\boxed{\text{DATA/ENTRY}}$ dial to specify the quantize value.

The preset value, "1/16", is OK for most situations. If you do not want quantize your playing while recording, set this parameter to "Off".

You can also quantize the track after recording it (page 163).

Recording a guitar part

To record a guitar part onto the selected track (only available for the Accomp tracks):

- Press the $\boxed{\text{GUITAR MODE}}$ field and use the $\boxed{\text{DATA/ENTRY}}$ dial to select "Acoustic" or "Electric". (Select "Off" if you want to use the track for something else.)
- Press the $\boxed{\text{SETTINGS}}$ field to jump to the GUITAR MODE page and set up your "guitar". See page 29 for details.
- Press the $\boxed{\text{EXIT}}$ button to return to the STL COMPOSER REC STANDBY page.
  Note: The "DOUBLING" function (Guitar Mode Options) is not available here, because only one track can be recorded at any one time.

Record mode

(17) Press the $\boxed{\text{REC MODE}}$ field in the lower left corner and use the DATA ENTRY $\boxed{\text{DEC}}$/$\boxed{\text{INC}}$ buttons to select the recording mode.

- **Replace**—Everything you record replaces the data of the selected track. This mode is automatically selected when you activate the record function for a track that does not yet contain data. If you select a track that already contains data, this parameter is set to "Mix" but could be changed to "Replace" if you wanted to overwrite the previous version.
- **Mix**—The data you record are added to the existing data of the selected track.

Specifying the pattern length

Every Style pattern must have a set length. Setting the MEASURE LENGTH value *now* will help you avoid a lot of confusion once you start recording.

The Arranger tends to add blank bars at the end of a track, which is usually due to the fact that you stopped recording a little late (i.e. after the last bar you played). This means that you often "record" 5 measures instead of 4, for example:

If you press $\boxed{\text{START/STOP}}$ after bar 4…

…your Style looks like this (5 bars):

Furthermore, in STYLE COMPOSER mode, all patterns are *looped* and played back until you press the $\boxed{\text{START/STOP}}$ button. A wrong number of measures (5 rather than 4, for example) is very likely to put you off, so do take the time to set the pattern length before you start recording.

(18) Press the $\boxed{\text{MEASURE LENGTH}}$ field and use the $\boxed{\text{DATA/ENTRY}}$ dial or the $\boxed{\text{DEC}}$/$\boxed{\text{INC}}$ buttons to select the desired length.

The setting range is 1~136 (or more, depending on the time signature) and "Off". Select "Off" if you haven't decided how long the pattern should be. In that case, the length is set when you stop recording.

It is perfectly possible to specify a different length value for each track and Division.

Note: Even one-shot patterns are looped in STYLE COMPOSER mode.

There is one last thing we need to set:

(19) Specify how long the count-in should be before recording starts by pressing the COUNT-IN field and using the DATA/ENTRY dial or the DEC/INC buttons to select one of the following options:

> Off: No count-in. Recording starts as soon as you press the START/STOP button (while REC ● flashes).

> 1 Meas: Recording starts after a 1-bar count-in.

> 2 Meas: Recording starts after a 2-bar count-in.

> Wait Note: Recording starts as soon as you play a note on the keyboard. (There will be no count-in.)

Recording

(20) Press the START/STOP button. Depending on the count-in setting, the metronome now counts down, then recording starts.

Note: You can also start recording using an optional footswitch connected to the FOOTSWITCH/EXPRESSION jack. See "Start/Stop" on p. 55.

You could start by playing only the bass drum part. If you specified the track length (see above) before recording, the Style Composer jumps back to the beginning of the pattern after the set number of measures. The second time around you could add the snare drum, the third time the HiHat, and so on.

When recording another part (ABass~Acc6), do everything you would do during a live performance: add modulation, Pitch Bend and to use an optional hold pedal connected to the SUSTAIN jack.

(21) Press START/STOP again to stop recording. The display changes to:

Auditioning your Style and adding more tracks

(1) Press the START/STOP button again to listen to your track.
The STYLE COMPOSER page contains two fields that allow you to select the pattern you want to audition. Here's how to select it:

(2) Press the MODE field and use the DATA/ENTRY dial or the DEC/INC buttons to select "Major", "minor" or "7th".
Only one mode can be selected for playback.

(3) Press the DIVISION field and use the DATA/ENTRY dial or the DEC/INC buttons to select one of the Divisions (Intro 1~4, Main 1~4, Intro 1~4, Fill Dwn 1~3, Fill Up 1~3, End 1~4).
Only one Division can be selected for playback.

If you like your drum part, continue with "Saving your Style". If not, record a new version:

(4) Press the REC ● button to jump to the following page:
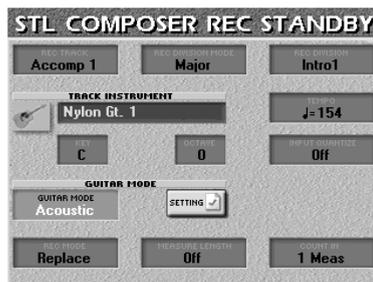
(5) Select the Mode and Division you want to redo.

(6) Press the REC MODE field and select...

> Replace: To replace the previous recording with new data.

> Mix: To add notes you forgot to record the first time.

(7) Continue with step (16) on page 155.

Saving your Style

Make it a habit to save your Styles as frequently as possible. After all, if someone decided to switch off your E-60/E-50 now, you would lose everything you have programmed so far.

(1) Press the SAVE field on the STYLE COMPOSER page.
The display changes to:

This page allows you to save the current Style to the internal memory, a memory card or a floppy disk.

- Press the EXTERNAL MEMORY, FLOPPY or INTERNAL MEMORY field to select the area where you want to save the Style.
- Enter the name for the file.
See page 44. If necessary, you can also supply the required COUNTRY and GENRE information for use with the STYLE FINDER function (only available if you select the internal memory or a memory card).
Note: The E-60/E-50 supports both upper- and lower-case letters for file names. Choose whichever is more convenient (or clearer).

(2) Press the EXECUTE field to save the data.
The E-60/E-50 returns to the STYLE COMPOSER page.

Recording other tracks and divisions

You can now record the second track – probably the bass. If you'd like to do the guided tour again, return to page 153. Do not forget to set the key for the bass part (see "Specifying the key (for melodic parts)" on p. 154).

Once the first Division is finished, you can record other Divisions. Use the clone function (page 154) to record several patterns in one go.

Do not forget to record the Fills, Intros and Endings to complete your Style. There are two groups of three fills: "Up" 1~3 and "Dwn" 1~3. "Up" fills are used when you switch on the AUTO FILL IN button and then press a VARIATION button of a higher number (transition from 1 to 2, for example).

"Dwn" fills are used when you switch on the AUTO FILL IN button and then press a VARIATION button of a lower number.

Intros are usually used at the beginning of a song and **End** patterns provide professional closing sections.
Note: The ABass track is monophonic. You can only record single-note patterns.

Muting tracks while recording others

After programming a few tracks, you may find that certain parts tend to confuse you. That is why the E-60/E-50 allows you to mute tracks that you do not want to hear *during recording*.

(1) On the STYLE COMPOSER page (which should be displayed now), press the MUTE field and the lines of the Style tracks you don't want to hear. Such tracks are flagged with an "M".

(2) Press the MUTE field again to switch off the function of the same name.
Note: This mute setting only applies to the STYLE COMPOSER page. During normal Arranger playback, all tracks that contain data are played back. Use the ERASE function to remove parts that should not appear in your accompaniments (see p. 164).

■Solo

If you need to listen to a track in isolation, press the SOLO field and the field of the track you want to solo and start playback. This mutes all other tracks, while the selected track is flagged with an "S". You can also select the track to be soloed using the ▲▼ buttons.

Press the SOLO field again to switch off the function of the same name.

Remarks
■Working from top to bottom – programming hints

If you listen carefully to the factory Styles, you will notice that most Divisions of a Style are very similar to one another and that the element of "evolution" or "amplification" between the various levels is usually derived from adding instruments to otherwise identical patterns. The MAIN 2 division may, for instance, add an electric guitar to the drums, bass and organ lines of the MAIN 1 level, while the foundation of the MAIN 2 level is still the same.

Therefore: always start by recording the most complex accompaniment (MAIN 4) while cloning all other looped divisions (page 154). Then move to the MAIN 3 Division and delete certain tracks (page 164), so that this division sounds somewhat simpler.

The next step would then be to select the MAIN 2 pattern and delete both the bells and whistles and the distorted guitar.

Metronome

In Style Composer mode, the metronome sounds during recording, unless you switch it off using the TEMPO ⎡METRONOME⎤ button. If you also need the metronome when listening to what you have just recorded, select another metronome mode. See "Metronome settings" on p. 59.

Playback in Arranger mode

Note: Save your Style before trying it out with the Arranger.

If the Style stops unexpectedly during playback in Arranger mode, try different chords. Chances are that you only programmed the major pattern, so that the Arranger selects an empty pattern when you play a minor or seventh chord. Remember to set the Mode parameter to "M= m=7" until you have come to grips with the possibilities of the E-60/E-50's Arranger. That way, those three patterns will sound alike, but at least you are sure that the Arranger does not stop when you play a minor or seventh chord.

Using existing Styles

Another way of programming Styles is to use parts from other Styles. The E-60/E-50 allows you to:

• Select the desired Style (to copy it to the Style RAM memory) and edit it.
• Copy one or all tracks of the selected Division.
• Copy just a few notes of an existing part.
• Copy tracks or notes between Divisions.
  This allows you to create new Styles by assembling tracks from different existing Styles.

  Note: You cannot copy an AccDrums track to another track (AccBass~Acc6). Likewise, the bass part can only be copied to an ABass track. Accomp tracks, however, can be copied to whichever Accomp track you like.

  Note: If the Style RAM memory already contains new data, save it before copying. The E-60/E-50 has no Undo function. Saving a Style before copying allows you to revert to the previous version if something goes wrong. See "Saving your Style" on page 157.

Starting with all tracks of an existing Style

The easiest way to do this is by selecting a factory Style and edit it.

(1) Select the Style you want to work with (see p. 25).

(2) Press the ⎡MENU⎤ button.

The display changes to:

(3) Press the ⎡STYLE COMPOSER⎤ field.

(4) Change the Style data to your liking.

Copying individual Style tracks

The COPY function can be used to copy individual tracks, Modes and Divisions to replace existing parts while keeping the remaining parts of the Style already in the Style RAM memory.

(1) Press the TRACK EDIT field on the STYLE COM-POSER page, followed by the COPY field.

(2) Press the Source field.

(3) Select the Style that contains the track(s) to be copied:

■Selecting a factory Style

Use the STYLE buttons and the fields in the display to select the desired Style. The long field shows the name of the Style selected as source.

■Selecting an 'external' Style

You can also work with a Style saved in the internal memory area, on a floppy disk or a memory card.

- Press the DISK USER field to jump to the STYLE FINDER page.

- See "Style Finder: quickly locating Styles" on p. 73 for the complete procedure.
- Press the field of the Style you need (it appears on an orange background).
- Press the GET IT field to return to the STYLE TRACK EDIT/COPY page.

(4) Press the TRACK field and use the DATA/ENTRY dial or the DEC/INC buttons to select the track to be copied.

You can also select "ALL" to copy all tracks of a given Mode/Division. In that case, DESTINATION TRACK is also set to "ALL".

(5) Repeat this operation with the MODE and DIVISION fields to select the Mode (Major, Minor, 7th, ALL) and Division (Int 1~4, Int ALL, Main 1~4, Main ALL, FDw 1~3, FDw ALL, FUp 1~3, FUp ALL, End 1~4, End ALL).

(6) Press the LISTEN field to listen to the pattern you are about to copy.
Note: LISTEN is not available when you select "ALL" for the MODE or DIVISION field.

■FROM

Start by specifying the position of the first event (or note) to be copied.

(7) Press the BAR, BEAT and CPT fields in the FROM row and use the DATA/ENTRY dial or the DEC/INC buttons to set the position of the starting point.

By default, the FROM parameters are set to "Bar 1, Beat 1, CPT 0".

■TO

The TO position indicates the end of the excerpt to be copied. By default, the TO values are set to include the entire track.

(8) Press the BAR, BEAT and CPT fields, and use the DATA/ENTRY dial or the DEC/INC buttons to set the desired position.

To copy an entire bar, select the beginning of the following bar. Example: to copy bars 1~4 specify "FROM 1-1-0/TO 5-1-0".

(9) Press LISTEN to listen to the selected excerpt.

(10) Press the Destination field.

■COPY MODE

Copying can be carried out in one of two modes:

Replace: The data in the selected range of the source track overwrite the destination track.

Mix: The data in the selected range of the source track are added to the data on the destination track.

In either case, the length of the destination track may change to include all data of the source track.

Note: If the Style RAM memory already contains new data, save it before copying. The E-60/E-50 has no Undo function. Saving a Style before copying allows you to revert to the previous version if something goes wrong. See "Saving your Style" on page 157.

(11) Press the COPY MODE field and use the DEC/INC buttons to select "Replace" or "Mix".

(12) Press the TRACK field and use the DATA/ENTRY dial to select the track you wish to copy the data to.

Note: AccDrums data can only be copied to AccDrums tracks. Likewise, you can only copy ABass data to other ABass tracks. If you selected "ALL" for SOURCE TRACK, this TRACK parameter is also set to "ALL".

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(13) Repeat this operation with the MODE and DIVISION fields to select the Mode (Major, Minor, 7th, ALL) and the Division (Intro 1~4, Main 1~4, Fill Dwn 1~3, Fill Up 1~3, End 1~4, ALL).
Note: If you selected "ALL" for SOURCE MODE/DIVISION, this MODE/DIVISION parameter is also set to "ALL".

(14) Press the COPY TIMES field and use the DATA/ENTRY dial or the DEC/INC buttons to specify the number of copies to be made. Select "1" to copy the excerpt only once.

(15) Press the LISTEN field to listen to the destination track.
The **INTO** position indicates where the beginning of the source excerpt will be after the copy operation. To copy the source data to the beginning of the destination track, select BAR= "1", BEAT= "1" and CPT= "0".

(16) Press the BAR, BEAT or CPT field and use the DATA/ENTRY dial or the DEC/INC buttons to set the target (INTO) position.

(17) Press the EXECUTE field to copy the data.

Editing Styles on the fly via additional recordings

Adding notes in realtime
To add notes to an existing part, proceed as follows:
- On the STYLE COMPOSER page, select the Division you wish to change (page 154).
- Press the RECORDER REC ● button, the REC MODE field and use the DATA/ENTRY dial or the DEC/INC buttons to select "Mix".
- Select the track and start recording by pressing the START/STOP button. Play the notes where you want them to sound.

Adding controller data in realtime
To add controller data (modulation, Pitch Bend, Hold, expression) to an existing part, select REC MODE= "Mix". Operate the performance function (BENDER/ MODULATION lever, optional footswitch for Hold data, optional foot controller for expression data) where needed.

Adding or changing settings of existing parts
The following operations require that you record in "Mix" mode without touching the keyboard or controllers. Unless you want to program continuous value changes (Panpot data, for example), you can stop recording after the first beat. Static settings are indeed always written at the beginning of the track in question.

■ **Sound/Drum Set selection**
To select another sound or Drum Set for an existing Style track, proceed as follows:

(1) Press the RECORDER REC ● button.
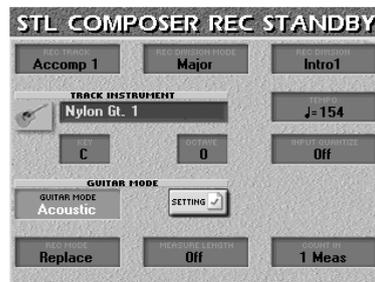
(2) Press the TRACK field and use the DATA/ENTRY dial to select the track you wish to assign another sound (or Drum Set) to.
If you select the "AccDrums" track, the display looks slightly different:
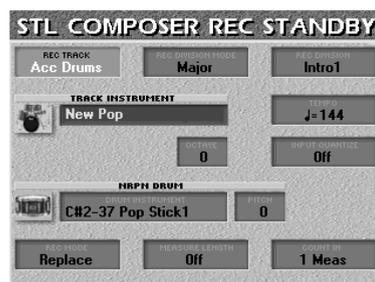
(3) Select the DIVISION and MODE whose settings you wish to change and possibly also all clones (page 154).

(4) Press the REC MODE field and use the DEC/INC buttons to select "Mix". (Let us assume that your track already contains data.)

(5) Select the new sound (or Drum Set) to be assigned to the selected track and division by pressing the TRACK INSTRUMENT field and using the on-screen fields and TONE buttons. Finally, press EXIT to return to the page shown above.
Note: See "Drum Instrument & Pitch" for the additional parameters for the AccDrums track (you may want to set them before performing step (6)).

(6) Press START/STOP to start recording.

(7) Press START/STOP again after the first or second beat (but wait until the count-in, if any, is finished).
This completes sound selection. The new sound address replaces the old one.

■**Drum Instrument & Pitch**
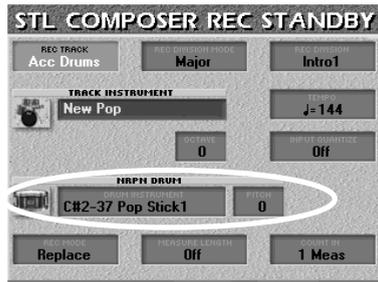
After selecting the "AccDrums" track, you can change the pitch of certain sounds of the selected Drum Set. The eligible sounds and corresponding note numbers are:

C#2/37 Side Stick	E3/52 Chinese Cymbal
D2/38 Stand.2 Snare 1	G#3/56 Cowbell
E2/40 Stand 2. Snare 2	A3/57 Crash Cymbal 2
F2/41 Low Tom 2	F4/65 High Timbale

Note: The names of the drum/percussion sounds depend on the currently selected Drum Set. The sounds are usually similar in nature, however.

• On the above display page, select the AccDrums track.
• Select the Division whose settings you wish to change and possibly also all clones (page 154).
• Press the REC MODE field and use the DEC/INC buttons to select "Mix". (Let us assume that your track already contains data.)
• Press the NRPN DRUM field and select the drum sound whose pitch you want to change with the DATA/ENTRY dial or the DEC/INC buttons.
• Press the PITCH field and use the DATA/ENTRY dial to set the desired pitch (–64~+63).
You can play on the keyboard to listen to the result.
• Press the START/STOP button to start recording.
• Press START/STOP again after the first or second beat (but wait until the count-in, if any finished).

Expression, Panpot, Reverb, Chorus
Setting or modifying the Expression, Panpot, Reverb (Send) and Chorus (Send) parameters is similar to assigning sounds to existing tracks.

(1) Stop playback of your Style (if it is running).
(2) Press the MIXER field on the STYLE COMPOSER page.

The display changes to:

(3) Select the track by pressing its line in the table. The name of that track appears on a light background.
(4) Select the MODE and DIVISION whose settings you want to change.
(5) Press the REC field of the parameters whose settings you want to record.
Only switch this on for settings you want to change. For safety reasons, you might consider recording one change at a time.
(6) Press the EXPRESSION, PANPOT, REVERB SEND or CHORUS SEND field, depending on the parameter you want to set.
(7) Use the DATA/ENTRY dial or the DEC/INC buttons to set the desired value.
The REVERB SEND and CHORUS SEND settings represent *Send* values and indicate how strongly the track in question should be processed by the reverb or chorus effect. The settings of the effects processors themselves need to be changed using the STYLE MAKEUP TOOLS – after programming your Style (the Style Composer does not recognize the MAKEUP TOOLS settings and discards them when you save your Style).

You can create interesting panning effects by slowly shifting the selected track from left to right (or vice versa) in the course of a pattern. This is especially effective for synthesizer or guitar riffs. Continuous changes mean that you have to keep recording until the end of the pattern.

(8) Press the RECORDER REC ● button.
(9) Press the START/STOP button to start recording. If you are changing a static setting, you can stop recording on the second beat.
(10) Press START/STOP again to stop recording.
(11) Press the Back field to return to the STYLE COMPOSER page.

About the Mixer

The STYLE MIXER functions can be used in three ways: to try out settings during playback without recording them, to record the events available on this page or to change some (i.e. not all) of them at a later stage.
For the first approach, start playback of your Style, then select the STYLE MIXER page, then change the settings. (They are not recorded and reset when the loop returns to the beginning.)

For the second approach, stop Style playback, select the STYLE MIXER page, then proceed with step (3) above.

For the third approach (a kind of punch-in), select the STYLE MIXER page, press RECORDER REC ●, then press START/STOP to start recording. When you reach the place where you want to change an already recorded setting, press the associated REC field and modify the value. Recording will be deactivated at the end of the pattern (even though playback goes on).

Changing the preset tempo
Here is how to change the preset tempo of your Style:

(1) While on the STYLE COMPOSER page, press the RECORDER REC ● button.

STL COMPOSER REC STANDBY
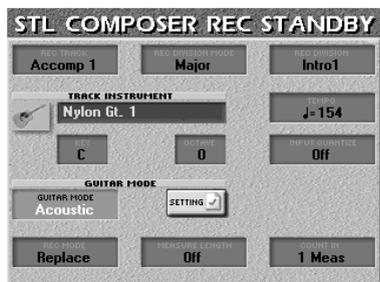
There is no need to select a Mode, Division or track, because the tempo value is shared by all tracks and patterns.

(2) Press the TEMPO field and set the value (20~250) using the DATA/ENTRY dial or the DEC/INC buttons.

(3) Press the START/STOP button to record one or two beats, then press it again to stop recording.
Do not play on the keyboard or use any controllers connected to the E-60/E-50, though!

Note: The last tempo value you record becomes the Style's preset tempo.

Style Track Edit functions

All display pages of the Style Track Edit mode have a Back field that allows you to jump to the STYLE COMPOSER page.

The STYLE TRACK EDIT functions are very similar to those of the 16-track sequencer. If you know how to use those, you will have little trouble understanding how the STYLE TRACK EDIT functions work.

Here are a few guidelines for editing your Style:
(a) Save your Style before continuing. That way, you can always return to the original if your changes do not work out as expected. See "Saving your Style" on p. 157 for details.
(b) Select the track(s) and pattern(s) you wish to modify.
(c) Select the range (FROM and TO) for the edit operation.
(d) Enter what should be changed and how it should be changed. Press the desired field and use the DATA/ENTRY dial or the DEC/INC buttons.
(e) Confirm the operation by pressing the EXECUTE field.
(f) Save your Style again.

The STYLE TRACK EDIT level of the STYLE COMPOSER provides 12 functions: Quantize, Erase, Delete, Copy, Insert, Transpose, Change Velo, Change Gate Time, Global Change, Shift Clock, Track Length and Time Signat. There is also a MICRO EDIT environment that allows you to add, delete or change individual events. See page 170 for details.

To select one of the STYLE TRACK EDIT functions, proceed as follows:

(1) Load the Style you want to edit (if it does not yet reside in the E-60/E-50's Style RAM memory).

(2) Press the MENU button, then the STYLE COMPOSER field.

STYLE COMPOSER

(3) Press the TRACK EDIT field.

STYLE TRACK EDIT

(4) Press a field in the top two rows to select the desired STYLE TRACK EDIT function.
If, after selecting one of these functions and setting parameter values, you decide not to execute the transformation, do not press the EXECUTE field.

(5) Select the tracks, Modes and Divisions you wish to modify.

(6) Select the range ("FROM" and "TO") for the edit operation.
The FROM and TO parameters allow you to specify the positions (measure/beat/clock) of the track excerpt you want to change.

Example: to change measures 1~4 of the selected track, enter the following values:

FROM: BAR= 0001	TO: BAR= 0005
BEAT= 01	BEAT= 01
CPT= 000	CPT= 000

(7) Specify what you want to change and how it should change: press one of the parameter fields (to the right of the FROM/TO section) and use the DATA/ENTRY dial or the DEC/INC buttons.

(8) Confirm the operation by pressing the EXECUTE field.

(9) Save your Style.

QUANTIZE

Use this function if you chose not to quantize your music during recording and now realize that the timing is not quite what you expected it to be. If only certain notes in a given time range need to be quantized, you should narrow down the edit range using the FROM/TO parameters.

■TRACK (ADrums~Acc6, ALL)
Allows you to select the track you wish to edit. You can also select "ALL" here, in which case the operation applies to all tracks.

■MODE
Allows you to select the Mode to be edited: "Major", "minor" or "7th".

■DIVISION
Use this parameter to select the Division you want to edit: Intro 1~4, Main 1~4, Fill Dwn 1~3, Fill Up 1~3, End 1~4.

■FROM
● BAR (1~[last measure of the track or pattern])—Refers to the first measure to be edited. By default, the FROM value is set to the beginning of the selected track(s).
● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of selectable beats depends on the selected time signature.
● CPT (1~119)—Refers to the starting CPT position. "CPT" is short for "Clock Pulse Time", the smallest unit used by the E-60/E-50. (There are 120 CPTs to every beat of a 4/4 bar.) Change this setting only if your edit operation should start after the selected beat.

■TO
By default, the TO position is set to the last event of the selected track (or the last event of the longest track when you select "ALL").
● BAR (1~[last measure of the track or pattern])—This is where you specify the last measure to be edited.
● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of selectable beats depends on the selected time signature.
● CPT (1~119)—Refers to the last clock that should be affected by the edit operation. Change this setting only if your edit operation should not end exactly on the selected beat.

■FROM NOTE (0 C-~127 G9)
This parameter allows you to set the note (or lower limit of the note range) to be modified within the specified FROM/TO time range.
This parameter is not displayed when you select EQUAL, UNEQUAL, HIGHER or LOWER.

■TO NOTE (0 C–~127 G9)

This parameter allows you to set the upper limit of the note range to be modified within the specified FROM/TO time range.

■Fine-tuning the note range

Before setting "FROM NOTE" (and possibly "TO NOTE"), you can decide how you want to use the note indications. Depending on the option you choose, "FROM NOTE" may not even be available, so that setting it beforehand would be a waste of time.

EQUAL	Only the selected note (note name/note number) will change. (The note can be set using the TO NOTE field.)
UNEQUAL	All notes except the one you select will change. (The note can be set using the TO NOTE field.)
HIGHER	Only notes above the selected one will change. (The note can be set using the THAN NOTE field.)
LOWER	Only notes below the selected one will change. (The note can be set using the THAN NOTE field.)
INSIDE	Only the notes between FROM NOTE and TO NOTE will change.
OUTSIDE	Only the notes below FROM NOTE and above TO NOTE will change.

See "Fine-tuning the note range" on p. 131 for an illustration.

■RESOLUTION
(1/4, 1/8, 1/8T, 1/16, 1/16T, 1/32, 1/32T, 1/64)

This parameter sets the resolution of the Quantize function. Be sure to always select the value of the shortest note you recorded. Otherwise, your part no longer sounds the way you played it, because shorter notes are shifted to the wrong positions.

■STRENGTH (0%~100%)

Use this parameter to specify how precise the timing correction should be. "0%" means that the selected RESOLUTION value is not applied ("0% correction"), while "100%" means that all notes are shifted to the mathematically correct positions.

■EXECUTE

Press this field to confirm your settings and edit the data.

ERASE

ERASE allows you to selectively delete data either within a specified range of measures, beats or clocks or from the entire track(s). When DATA TYPE is set to "ALL", ERASE substitutes the required number of rests for the data you delete, so that you end up with the equivalent number of blank measures. If you also want to eliminate the measures themselves, use DELETE (see below).

■TRACK (ADrums~Acc6, ALL)

Allows you to select the track you wish to edit. You can also select "ALL" here, in which case the operation applies to all tracks.

■MODE

Allows you to select the Mode to be edited: "Major", "minor" or "7th".

■DIVISION

Use this parameter to select the Division you want to edit: Intro 1~4, Main 1~4, Fill Dwn 1~3, Fill Up 1~3, End 1~4.

■FROM

● BAR (1~[last measure of the track or pattern])—Refers to the first measure to be edited. By default, the FROM value is set to the beginning of the selected track(s).
● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of selectable beats depends on the selected time signature.
● CPT (1~119)—Refers to the starting CPT position. "CPT" is short for "Clock Pulse Time", the smallest unit used by the E-60/E-50. (There are 120 CPTs to every beat of a 4/4 bar.) Change this setting only if your edit operation should start after the selected beat.

■TO

By default, the TO position is set to the last event of the selected track (or the last event of the longest track when you select "ALL").

● BAR (1~[last measure of the track or pattern])—This is where you specify the last measure to be edited.
● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of selectable beats depends on the selected time signature.
● CPT (1~119)—Refers to the last clock that should be affected by the edit operation. Change this setting only if your edit operation should not end exactly on the selected beat.

Note: If you only need to edit one event (or message), we recommend using the STYLE MICRO EDIT page (page 170).

■**DATA TYPE**

Allows you to select the data to be edited.

ALL: All parameters listed below.

Note: Only note messages.

Modulat: CC01 messages usually used for adding vibrato (i.e. use of the BENDER/MODULATION lever).

PanPot: CC10 messages that specify the stereo position.

Express: CC11 messages that used for temporary volume changes. This parameter can also be edited on the MIXER page (see p. 161).

Reverb: Reverb Send messages (how strongly the part should be processed by the reverb effect). This parameter can also be edited on the MIXER page (see p. 161).

Chorus: Chorus Send messages (how strongly the part should be processed by the chorus effect). This parameter can also be edited on the MIXER page (see p. 161).

Prog. C.: Program change messages, used to select sounds or Drum Sets. Note: by deleting program change messages you also dispose of the related CC00 and CC32 (bank select) messages.

P.Bender: Pitch Bend data (i.e. use of the BENDER/MODULATION lever).

NRPN Dr: Changes to the pitch of certain drum instruments. See page 161.

■**FROM NOTE (0 C–~127 G9)**

This parameter is only displayed if DATA TYPE (see above) is set to "Note". It allows you to set the note (or lower limit of the note range) to be modified within the specified FROM/TO time range.

It is not displayed when you select EQUAL, UNEQUAL, HIGHER or LOWER. See also "Fine-tuning the note range" on p. 164.

■**TO NOTE (0 C–~127 G9)**

This parameter allows you to set the upper limit of the note range to be modified within the specified FROM/TO time range.

■**EXECUTE**

Press this field to confirm your settings and edit the data.

DELETE

Unlike the ERASE function, DELETE not only erases the data but also the measures, beats and/or CPT units, so that all data that lie behind the TO position are shifted towards the beginning of the track(s). You cannot choose the data type to be erased.

■**TRACK (ADrums~Acc6, ALL)**

Allows you to select the track you wish to edit. Select "ALL" to edit all tracks.

■**MODE**

Allows you to select the Mode to be edited: "Major", "minor" or "7th".

■**DIVISION**

Use this parameter to select the Division you want to edit: Intro 1~4, Main 1~4, Fill Dwn 1~3, Fill Up 1~3, End 1~4.

■**FROM/TO**

FROM refers to the position where the edit operation is to begin. That position is specified as a Bar-Beat-CPT cluster. TO designates the position where the edit operation is to end (Bar-Beat-CPT). See page 163 for details.

■**EXECUTE**

Press this field to confirm your settings and edit the data.

COPY

See page 158 for a step-by-step discussion. This function also allows you to copy tracks from other Styles.

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INSERT

INSERT allows you to insert space and shift data that lie behind the FROM position further towards the end of the track (this is the exact opposite of DELETE). The empty measures you create can be "filled" using the COPY function or by recording new phrases in that area.

Note: This function provides no TO pointer. Instead, you have to specify the length of the insert using the FOR values.

■**TRACK (ADrums~Acc6, ALL)**
Allows you to select the track you wish to edit. You can also select "ALL" here, in which case the operation applies to all tracks.

■**MODE**
Allows you to select the Mode to be edited: "Major", "minor" or "7th".

■**DIVISION**
Use this parameter to select the Division you want to edit: Intro 1~4, Main 1~4, Fill Dwn 1~3, Fill Up 1~3, End 1~4.

■**FROM**
● BAR (1~[last measure of the track or pattern])—Refers to the first measure to be edited. By default, the FROM value is set to the beginning of the selected track(s).
● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of selectable beats depends on the selected time signature.
● CPT (1~119)—Refers to the starting CPT position. "CPT" is short for "Clock Pulse Time", the smallest unit used by the E-60/E-50. (There are 120 CPTs to every beat of a 4/4 bar.) Change this setting only if your edit operation should start after the selected beat.

■**FOR**
Specifies how many bars, beats and CPTs are to be inserted.
● BAR, BEAT, CPT—See above.

■**EXECUTE**
Press this field to confirm your settings and insert the requested number of bars, beats and clocks.

TRANSPOSE

This function allows you to transpose the notes of the selected track (non-note data obviously cannot be transposed).

■**TRACK (ADrums~Acc6, ALL)**
Allows you to select the track you wish to edit. You can also select "ALL" here, in which case the operation applies to all tracks.
When combined with "FROM NOTE" and "TO NOTE" (see below), TRANSPOSE is also useful for the AccDrums track. It allows you to select another snare or kick sound, for example.

■**MODE**
Allows you to select the Mode to be edited: "Major", "minor" or "7th".

■**DIVISION**
Use this parameter to select the Division you want to edit: Intro 1~4, Main 1~4, Fill Dwn 1~3, Fill Up 1~3, End 1~4.

■**VALUE (–127~127)**
This is where you can set the transposition interval in semitone steps. Select "2", for example, to transpose pattern in "C" to "D".
Note: Be careful when applying Transpose to the AccDrums track. Transposing all notes of this track leads to dramatic changes.

■**FROM NOTE (0 C–~127 G9)**
This parameter allows you to set the note (or lower limit of the note range) to be modified within the specified FROM/TO time range.
It is not displayed when you select EQUAL, UNEQUAL, HIGHER or LOWER. See also "Fine-tuning the note range" on p. 164.

■**TO NOTE (0 C–~127 G9)**
This parameter allows you to set the upper limit of the note range to be modified within the specified FROM/TO time range.

■**EXECUTE**
Press this field to confirm your settings and edit the data.

CHANGE VELO

The CHANGE VELO function allows you to modify the dynamics (called "velocity") of a track or excerpt. See p. 135 for details. Only note events can be changed.

■**TRACK (ADrums~Acc6, ALL)**
Allows you to select the track you wish to edit. You can also select "ALL" here, in which case the operation applies to all tracks.

■**MODE**
Allows you to select the Mode to be edited: "Major", "minor" or "7th".

■**DIVISION**
Use this parameter to select the Division you want to edit: Intro 1~4, Main 1~4, Fill Dwn 1~3, Fill Up 1~3, End 1~4.

■**FROM/TO**
FROM refers to the position where the edit operation is to begin. That position is specified as a Bar-Beat-CPT cluster. TO designates the position where the edit operation is to end (Bar-Beat-CPT). See page 163 for details.

■**BIAS (–99~99)**
The BIAS parameter allows you to specify by how much the velocity values should change. Select a positive value to increase the velocity (the value is added to the velocity value of the affected notes) or a negative value to decrease the velocity values (that value is subtracted). Select "0" if you prefer to work with the MAGNIFY parameter (see below).
Note: Even the highest positive or negative VALUE doesn't allow you to go beyond "1" or "127". There is a reason why "0" is impossible: that value is used to indicate the end of a note (note-off). "127", on the other hand, is the highest velocity value the MIDI standard can muster. Adding a high positive velocity value may thus lead to all notes being played at "127".

■**MAGNIFY (0~200%)**
This parameter works like a "Compander" effect (a dynamics processor that simultaneously acts as compressor and expander), although it processes MIDI data: by selecting a value above "100%" you increase the differences between high and low velocity values in the selected range. Values below "64" are lowered, while values above "64" are increased. The result is therefore that the difference between pianissimo and fortissimo becomes far more pronounced.
MAGNIFY values below "100%" have the opposite effect: they push all velocity towards the imaginary center of "64", thus reducing differences in playing dynamics.

■**FROM NOTE/TO NOTE (0 C–~127 G9)**
FROM NOTE refers to the lower limit of the note range you want to change. TO NOTE represents the upper limit. See also "Fine-tuning the note range" on p. 164.

■**EXECUTE**
Press this field to confirm your settings and edit the data.

CHANGE GATE TIME

This function allows you to modify the duration of the notes in the selected time (FROM/TO) and note (FROM/TO NOTE) ranges. See page 136 for details.

■**TRACK (ADrums~Acc6, ALL)**
Allows you to select the track you wish to edit. You can also select "ALL" here, in which case the operation applies to all tracks.

■**MODE**
Allows you to select the Mode to be edited: "Major", "minor" or "7th".

■**DIVISION**
Use this parameter to select the Division you want to edit: Intro 1~4, Main 1~4, Fill Dwn 1~3, Fill Up 1~3, End 1~4.

■**BIAS (CPT) (–1920~1920)**
This parameter sets the amount by which the duration (or gate time) of the selected notes is to change. The shortest possible GATE TIME value is "1" (used for all drum notes), so that selecting "–1000" for notes with a GATE TIME value of "1" in the specified time range still leaves you with the same value. You cannot use CHANGE GATE TIME to erase notes.

■**MAGNIFY (0~200%)**
Use this parameter rather than BIAS to produce proportional changes to the affected GATE TIME values. Values below "100%" decrease the duration, while anything above "100%" increases it. Select "100%" if you prefer to work with the BIAS (CPT) parameter (see above).

■**FROM NOTE/TO NOTE (0 C–~127 G9)**
FROM NOTE refers to the lower limit of the note range you want to change. TO NOTE represents the upper limit. See also "Fine-tuning the note range" on p. 164.

■**EXECUTE**
Press this field to confirm your settings and edit the data.

GLOBAL CHANGE

This function allows you to make quick changes to certain settings. The changes always apply to entire tracks (you cannot use GLOBAL CHANGE for just a few measures). You can apply global changes to the four editable Style track parameters (EXPRESS, REVERB, PANPOT and CHORUS) when you notice that the effect is too prominent or not strong enough.

You can also use it to "upgrade" older Styles to ensure that they use the E-60/E-50's new sounds.

■TRACK (ADrums~Acc6, ALL)
Allows you to select the track you wish to edit. You can also select "ALL" here, in which case the operation applies to all tracks.

■MODE
Allows you to select the Mode to be edited: "Major", "minor", "7th" or "ALL".

■DIVISION
Use this parameter to select the Division you want to edit: Intro 1~4, Main 1~4, Fill Dwn 1~3, Fill Up 1~3, End 1~4 ALL.

■INIT VALUE
Press this field to reset all values on this page to their initial state if you want to start again.

There are two kinds of changes that can be performed on this page: FROM/TO and INC/DEC.

■FROM/TO
Enter the original data value (i.e. the value that is being used right now by the selected track(s)) in the FROM column. For TO, specify the new value that should replace the FROM value. These are what we call "absolute" changes: you don't add or subtract values, you replace them with other values. This system is only available for messages that allow you to select sounds or sound banks, namely:
- ● CC00 (---, 0~127, ALL)—This control change is the so-called "MSB" bank select message. It allows you to select the Capital Tone (select "0") of a sound address if you don't want to use variations or to select another variation level. Select "---" if the current setting must not change.
- ● CC32 (---, 0~127, ALL)—This control change is the so-called "LSB" bank select message. Select "---" if the current setting must not change.
- ● PC (1~128)—Use this parameter to change the address, a.k.a. program change number, of a sound (e.g. from "1" to "2").

■INC/DEC
These are so-called "relative" changes: the positive or negative value you set here will be added to or subtracted from the original values of the selected track(s). Use these fields to increase or decrease the existing values for the entire selected track(s).
- ● Expression, Panpot Reverb, Chorus (–127~127)—These parameters allow you to add (+) or subtract (–) a given value to/from the current Expression, Pan, Reverb Send or Chorus Send values. This may come in handy if the realtime changes you recorded turn out to be too high or too low.
- ● Alteration Mode (Nearest, Degree, ---)—This message type is only available for melodic Style tracks (i.e. not for ADrums or ABass tracks). Style tracks you only just recorded do not contain it. It allows you to use a revolutionary system for adapting the recorded notes to a more natural behavior (also known as "voicing"). There are two options:

  Degree: This setting refers to the "old" system for real-time conversion of track information during Style playback. Based on the fundamentals of the chords you play during Arranger playback, it often leads to odd jumps of certain parts.

  Nearest: Refers to a new, more musical, system for real-time shifts of the recorded Style notes during Arranger playback. See also page 172 for an explanation of this concept.

  Select "---" if the selected pattern should ignore this setting.

  Note: This parameter is *not* available for: ADrums and ABass tracks, Intro3 & 4 and End3 & 4 patterns.

■EXECUTE
Press this field to confirm your settings and edit the data.

SHIFT CLOCK

SHIFT CLOCK allows you to shift the notes within the selected FROM/TO range. See page 138 for details.

■TRACK (ADrums~Acc6, ALL)
Allows you to select the track you wish to edit. You can also select "ALL" here, in which case the operation applies to all tracks.

■MODE
Allows you to select the Mode to be edited: "Major", "minor" or "7th".

■DIVISION
Use this parameter to select the Division you want to edit: Intro 1~4, Main 1~4, Fill Dwn 1~3, Fill Up 1~3, End 1~4.

■**DATA TYPE**
Allows you to select the data to be edited. See the list on page 165.

■**VALUE (–1920~1920)**
This parameter sets the amount by which the notes are shifted. The value refers to CPT units (one CPT= 1/120 ♩).
Note: Notes on the first beat of the first bar cannot be shifted further to the left, because that would mean shifting them to the "0" measure, which doesn't exist.

■**EXECUTE**
Press this field to confirm your settings and edit the data.

TRACK LENGTH

The TRACK LENGTH function allows you to modify the length (number of bars, beats and clocks) of a pattern after recording. Data that lie outside the range you decide to keep are discarded.

The various fields display the settings that are currently in effect. Obviously, you only need to change the settings of the Mode whose length you want to modify. The white part of the window shows the current length settings for the selected TRACK ("ADrums" in the example above) and DIVISION ("Main4"). The three columns ("MAJOR", "MINOR", "7TH") refer to the modes. There are only three lines (1~3) for Fill-Ins.
Note: There is no way to recall the previous version, so be sure to save your Style before continuing (see p. 157).

■**TRACK (ADrums~Acc6, ALL)**
Allows you to select the track whose length you wish to change.

■**DIVISION**
Use this parameter to select the Division you want to edit: Intro 1~4, Main 1~4, Fill Dwn 1~3, Fill Up 1~3, End 1~4.

■**LENGTH**
● BAR—Press this field and use the $\boxed{\text{DATA/ENTRY}}$ dial or the $\boxed{\text{DEC}}$/$\boxed{\text{INC}}$ buttons to set the length of the selected pattern(s) in steps of one bar. You can also make an existing track longer by specifying a BAR value that lies beyond the last notes.
Note: To change the BAR length of all three Modes, "switch on" all three BAR fields, then set the desired value.

● BEAT (1~[number of beats per bar])—Specifies the beat position. The number of selectable beats depends on the selected time signature.
Note: To change the BEAT length of all three Modes, "switch on" all three BEAT fields, then set the value.

● CPT—This field allows you to "fine-tune" the length. In most cases, you will probably work with multiples of ♩ notes (i.e. 120CPT) because 120CPT represent one beat of an X/4 bar (1/4, 2/4, 3/4, 4/4, etc.).
Note: To change the CPT length of all three Modes, "switch on" all three CPT fields, then set the value.

■**MODE**
Use these button icons to choose the Modes to which the new length setting should apply. You can also switch on two or all three button icons.
Note: If you set TRACK to "ALL", all three Modes are selected automatically (and that cannot be changed).

■**EXECUTE**
Press this field to confirm your settings and edit the data.

TIME SIGNAT

The TIME SIGNAT page allows you to check and set the time signature of the patterns. The major, minor and seventh Modes of a pattern must always use the same time signature, which is why you cannot edit them separately.

Use this parameter to specify the time signature of the selected pattern (DIVISION, see below). The MAIN, INTRO and ENDING instances comprise four variations, which is why there are four TIME SIGN values you can select using the VARIATION $\boxed{1}$~$\boxed{4}$ button icons. When you select "Fill Up" or "Fill Dwn" for DIVISION, only three TIME SIGN icons are displayed.

The most commonly used time signatures are: 2/4, 3/4, 4/4, 6/8 and 12/8. Other values (such as 7/4, 13/8, etc.) are also possible.
Note: When you change the time signature of an already recorded pattern, its notes and events are "reshuffled", so that you may end up with incomplete measures. None of your data are deleted, however.

■**DIVISION**
Use this parameter to select the Division you want to edit: Intro, Main, Fill Dwn, Fill Up, End.

■**VARIATION**
Use these button icons to select the pattern you want to change. If you set DIVISION to "Fill Dwn" or "Fill Up", there are only three button icons. You can switch on several or all button icons if you like. (But you cannot switch off all four or three.)

■**EXECUTE**
Press this field to confirm the new time signature and change the selected pattern(s).

Editing individual Style events (Style Micro Edit)

Select this mode if you need to change just one aspect of an otherwise perfect Style.

In this section, we will use the word "event" for any kind of message. An event is thus a command (or instruction) for the Arranger.

You can only view and edit one track at a time. Therefore, be sure to check the TRACK setting before editing the events displayed on this page.

(1) Select and load a (different) Style.

This is not necessary if you want to edit the Style you have just recorded. See "Selecting Music Styles" on p. 25 and "Style Finder: quickly locating Styles" on p. 73 for how to load a Style.

(2) Press the [MENU] button.

The display changes to:
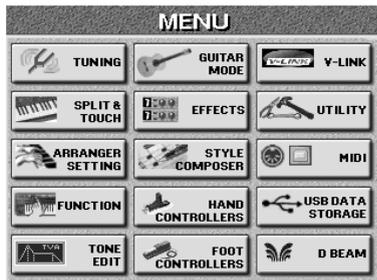
(3) Press the [STYLE COMPOSER] field.

(4) Press the [MICRO EDIT] field.

The display changes to:

(5) Press the [TRACK] field and use the [DATA/ENTRY] dial or the [DEC]/[INC] buttons to select the track you want to edit.

(6) Press the [MODE] field and use the [DATA/ENTRY] dial or the [DEC]/[INC] buttons to select the Mode you want to edit (Major, minor, 7th).

(7) Press the [DIVISION] field and use the [DATA/ENTRY] dial or the [DEC]/[INC] buttons to select the Division you want to edit (MAIN 1~4, Fill Up 1~3, Fill Dwn 1~3, Intro 1~4, Ending 1~4).

General notes about STYLE MICRO EDIT

■**Graphic representation of your data (piano roll)**

To getter a better idea of where your data are located and how they are distributed, press the field. The display then changes to:
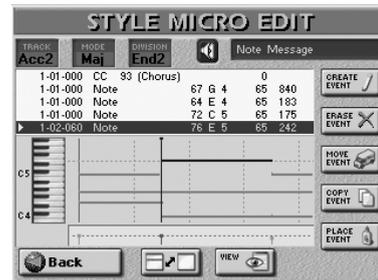
Except for a (perhaps) clearer representation of the data on the selected track, all other operations are the same as in standard view. Press again to see more values again.

Use the [DATA/ENTRY] dial and [▲][▼] buttons to scroll through the available events.

■**Position indications**

Sequencers only register "events" whose positions and distances specify when the notes are to be sounded or when they should change (i.e. their "sequence").

Each event is executed at a given point in time, which is why they all have a position indication ("1-01-119", for example). The first figure refers to the bar, the second to the beat within that bar and the third to the clock (CPT) between the current beat and the next. Each beat of a 4/4 bar comprises 120 clocks.

■**Monitoring note events**

The Style Composer can play back the note events you select. This may help you identify the occurrence you want to edit. Switch on the speaker icon (🔊) and move the cursor to a note event to hear that note.

■**VIEW**

Press this button icon if the list of track events has become so long that finding the events you wish to edit takes too long. The following pop-up appears:

- Switch on the button icons of events you want to see in the list (the button icons in question must light). The names of most available options are probably clear to you, so we won't explain them. Just one note: PROGRAM CHANGE also includes the bank select messages (CC00 and CC32) that are used for selecting sounds. See page 172 for the ALTERATION MODE message.

- Press ALL to switch on all button icons or NONE to switch them all off, in which case the STYLE MICRO EDIT list only contains the "End of Data" message.

- Press CLOSE to close the pop-up window without applying your changes.

■**General procedure**

To change information already available on the selected track, proceed as follows:

(1) Set TRACK, MODE and DIVISION by pressing the corresponding fields and using the DATA/ENTRY dial or the DEC/INC buttons.

(2) Press the white field (the event list) to be able to select events using the DATA ENTRY section.

(3) Use the ▲▼ buttons or the DATA/ENTRY dial to select the list entry you want to edit.
The name of the selected parameter appears in the upper right-hand corner of the display.

(4) Press the DATA ENTRY ▶ button to select the (first) value.
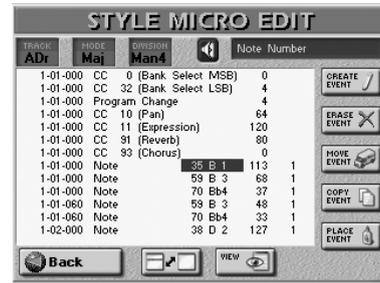
(5) Modify the value:
- Rotate the DATA/ENTRY dial. —or—
- Set the value using the DEC/INC buttons. —or—
- Press the DATA/ENTRY dial and enter the value using the numeric pad that appears in the display.

If you choose to work with the numeric pad, proceed as follows:

- Press the numeric button icons to enter the desired value. (Use Delete to delete the last figure you entered.)

- Press the +10% or −10% field to increase or decrease the current value by 10%.
- Press ENTER to confirm the value.
—or—
Press CLOSE to close the numeric pad window without changing the value.

(6) Press the DATA ENTRY ▶ button to select the next value and change it.

(7) When you're done, press the Back field to return to the STYLE COMPOSER page, then save your Style.

The parameters you can change are:

● Note and velocity messages—These messages always come in pairs. The first value ("Note Number 127 G9") refers to the note itself and the second ("On Velocity 127") to the velocity (playing dynamics).
The MICRO EDIT page adds a third message to that pair. It describes the duration of the note in question. You may remember this value from the TRACK EDIT environment, where it is called "**Gate Time**".

● Control Change—These messages usually add something to the notes being played, like modulation, a different volume, a new stereo position… The E-60/E-50 recognizes (and allows you to edit) all control change numbers the Arranger uses (CC01, 10, 11, 91, 93) and displays their "official" name.

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Note: CC64 (Hold) events generated by a footswitch connected to the HOLD FOOTSWITCH socket are converted into the equivalent GATE TIME values at the time of recording. You may therefore have to change the duration of the notes themselves.

● **Program Change**—These messages are used to select sounds within the current bank. As there are only 128 possibilities, these messages are usually preceded by control changes CC00 and CC32. That's why the E-60/E-50 inserts all three when you use the CREATE EVENT function.
Note: The CC00 value of ADrums tracks cannot be edited.

● **Pitch Bend**—These messages are used for temporary changes to the pitch of the notes being played at that time. Pitch Bend messages can be positive (higher) or negative (lower). Setting range: –128~128.

● **Alteration Mode**—This is a new event that allows you to specify how the notes recorded for a Style track will be used during Arranger playback. See below for details.
Note: This parameter is not available for ADrums tracks.

● **NRPN Dr**—This NRPN command is only available for ADrums tracks. It inserts CC99 with the value "24", CC98= "37" as well as CC06= "64". While the CC99 value cannot be changed, the CC98 value can be set to: 37, 38, 40, 41, 52, 56, 57 or 65 (these are note numbers of the drum sounds whose pitch can be changed). The CC06 value (which changes the pitch) can be set to 0~127, whereby "64" means that the pitch remains unchanged.

Editing events
■Editing Pitch Bend messages
Pitch Bend messages can be positive or negative (the range is –128~128). The value "0" means that the pitch of notes being played in that area is not altered.

If a Pitch Bend occurrence is not reset to "0" at some stage, all notes will keep sounding flat when you no longer want them to.

■Editing control changes
These messages (CC) can be set to the desired value (0~127) when the corresponding effect is needed – but they also need to be reset to "0" to avoid unpleasant surprises.

■About the "Note" messages
As stated above, note messages comprise a note number, a velocity value and a Gate Time value.

The range for note numbers is "0 (C–)"~"127 (G9)". Velocity messages can be set anywhere between "1" (extremely soft) and "127". The value "0" cannot be entered, because it would effectively switch off the note.

After selecting a Gate Time entry, pressing the DATA/ENTRY dial calls up the following pop-up:

Here, you can either set the required length as a CPT value (♩= 120CPT) or use the note fields to avoid lengthy calculations. Use the numeric pad to enter the desired duration. Drum parts usually use the Gate Time value "1" for all notes. Increasing it to "20", for example, has no audible effect on the sound durations. The maximum duration a note event can have is 99,999 clocks, which corresponds to roughly 208 bars.

About "Alteration Mode" messages

This message type is only available for melodic Style tracks (i.e. not for ADrums or ABass tracks) and needs to be inserted by hand (using CREATE EVENT). Style tracks you only just recorded do not contain it.

It allows you to use a revolutionary system for adapting the recorded notes to a more natural behavior (also known as "voicing"). There are two options:

● **Degree**—This setting refers to the "old" system for real-time conversion of Style track information for Style playback. Based on the fundamentals of the chords you play during Arranger playback, it often leads to odd jumps of certain parts.

● **Nearest**—Refers to a new, more musical, system for real-time shifts of the recorded Style notes during Arranger playback. Let us first look at an illustration:
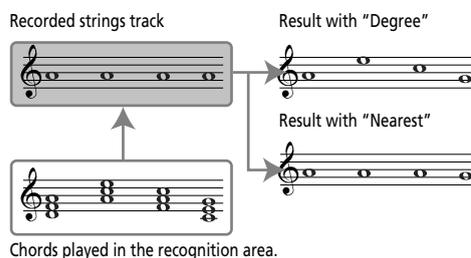
This new system is called "Adaptive Chord Voicing". The notes of the melodic Style tracks are compared against the chords played in the recognition area. If the next chord you play contains the note the selected part is already sounding (based on the previous chord), that note is maintained.
If the new chord does not contain that note, the Style part in question uses the closest ("Nearest") note. In the example above, the "G" is closer to the "A" sounded by the strings part than the "C". This produces a more musical behavior than any other system on the market.

Both "Degree" and "Nearest" allow you to specify the note range ("Limit Low" and "Limit High") the selected part may play. Notes that would fall outside that range during Arranger playback are automatically transposed to values inside the selected range. Rather than specifying two note values, you can also choose "Std", which means that the E-60/E-50 decides automatically when extremely high (or low) notes need to be shifted down (or up) by one or several octaves.

Other edit operations

The fields in the right half of the STYLE MICRO EDIT page allow you to reduce or expand the number of events of the track you selected.

■CREATE EVENT

Press this button icon to add a new event to the selected track. The following pop-up appears:

If the position for which you create a new event already contains other events, the new event is added at the end of that group.

• Press the button icon that corresponds to the kind of event you want to add.
The meaning of the available message types should be clear by now. Here are the default values of the events you create:

> Note: Note Number: 60 C4
> On Velocity: 100
> Gate Time: 60

> Program Change: CC00 Bank Select MSB, value "0"
> CC32 Bank Select LSB, value "4"
> Program Change Number "1"
> (The bank select messages are added automatically: you don't have to worry about that.)

> Pitch Bend: "0"

> Alteration Mode: Nearest
> Limit Low: Std
> Limit High: Std

• Specify the position where your new event should be inserted by pressing the [BAR], [BEAT] and [CPT] fields and entering the desired value for each unit using the [DATA/ENTRY] dial or the [DEC]/[INC] buttons.
• Press the [EXECUTE] field to confirm your settings and add the new event.
Press [CLOSE] to close the pop-up window without applying your changes.

Adding notes

If you press the [NOTE] field, the display changes to:

This pop-up window allows you to enter up to 10 notes for each position (see the [BAR], [BEAT] [CPT] fields). The velocity values of the keys you press are also adopted.

• To enter chords: press and hold the key of at least one constituent note, then press the remaining keys. Any key you press after releasing the keys of notes already entered in the "table" replaces the "old" notes.
• Press one of the note icons to specify the duration of the note(s) shown in the "table". This is possible both before and after playing the required note(s) on the keyboard.
• Press the [EXECUTE] field to confirm your settings and add the new note(s).

■ERASE EVENT

- Use the $\boxed{\text{DATA/ENTRY}}$ dial or the $\boxed{\blacktriangle}\boxed{\blacktriangledown}$ buttons to select the event you want to delete.
- To select several consecutive events, press the $\boxed{\text{DATA/ENTRY}}$ dial while turning it towards the left (upward direction) or the right (downward direction).
- Press the $\boxed{\text{ERASE EVENT}}$ button icon to remove the event you selected.

■MOVE EVENT

This function allows you to move one or several events.

Note: If the position to which you move the selected event already contains other events, the moved event is added at the end of that group.

- Select the event you want to move.
  Note: Events located at "1-01-00" cannot be moved further to the left.
- To select several consecutive events, press the $\boxed{\text{DATA/ENTRY}}$ dial while turning it towards the left (upward direction) or the right (downward direction). All events selected in this way appear on a dark background.
- Press the $\boxed{\text{MOVE EVENT}}$ button icon. The following pop-up appears:

- Specify the position to which the first event (in chronological order) of the selected group should be shifted by pressing the $\boxed{\text{BAR}}$, $\boxed{\text{BEAT}}$ and $\boxed{\text{CPT}}$ fields, and entering the desired value for each unit using the $\boxed{\text{DATA/ENTRY}}$ dial or the $\boxed{\text{DEC}}/\boxed{\text{INC}}$ buttons.
- Press the $\boxed{\text{EXECUTE}}$ field to confirm your settings and move the event.
  Press $\boxed{\text{CLOSE}}$ to close the pop-up window without applying your changes.

■COPY EVENT

This function allows you to copy one or several events. Use $\boxed{\text{PLACE EVENT}}$ to insert a copy of those events at the desired position.

Note: For this function, you could take advantage of the VIEW filter to avoid selecting event types that should not be included in the copy. See "VIEW" on p. 171.

- To select several consecutive events, press the $\boxed{\text{DATA/ENTRY}}$ dial while turning it towards the left (upward direction) or the right (downward direction). All events selected in this way appear on a dark background.
- Press the $\boxed{\text{COPY EVENT}}$ button icon.
  Each new selection will replace the previous one.

■PLACE EVENT

This function is only available if the Style Composer's clipboard already contains events that you copied using COPY EVENT.

Press the $\boxed{\text{PLACE EVENT}}$ button icon. The following pop-up appears:

- Specify the position where the first event you copied should be inserted by pressing the $\boxed{\text{BAR}}$, $\boxed{\text{BEAT}}$ and $\boxed{\text{CPT}}$ fields, and entering the desired value for each unit using the $\boxed{\text{DATA/ENTRY}}$ dial or the $\boxed{\text{DEC}}/\boxed{\text{INC}}$ buttons.
- Press the $\boxed{\text{EXECUTE}}$ field to confirm your settings and add the new event(s).
  Press $\boxed{\text{CLOSE}}$ to close the pop-up window without applying your changes.

Note: Events inserted with PLACE EVENT are added to any events that may already exist in that area. Existing events are thus not pushed towards the end of the song.

15. Disk/Media functions

The E-60/E-50's DISK & MEDIA functions allow you to save edited data and settings to the internal memory, a memory card or floppy disk, to save and load User Program Sets and MIDI Sets, to format various storage "media", to delete files and to copy data.

If you're still wondering whether to use a floppy disk or a memory card, consider this:

• Memory cards have a much bigger capacity (up to 4GB) and are more reliable than floppy disks.

• Though you can also use 2DD or 2HD floppies, the most helpful functions (Song/Style/User Program Finder, the PLAY LIST function and automatic song links to User Programs) are only available for files on memory card or in the internal memory.
2HD disks have twice the capacity of 2DD disks, so use 2HDs whenever you can.

The how-to's

(1) Press the DISK&MEDIA button.

The display changes to:
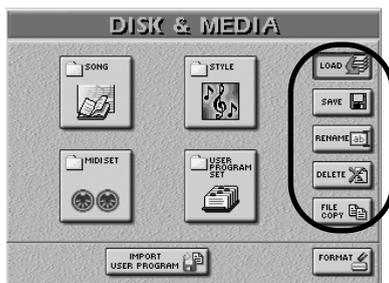
(2) If you intend to work with a floppy disk or memory card, insert it into the drive or slot.

(3) Select the function you need by pressing the corresponding field in the right column.

(4) Select the data type you want to save, load, rename or delete by pressing one of the big fields.
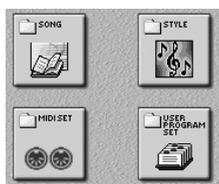
(5) On the display page that appears now, select the media: INTERNAL MEMORY, FLOPPY or EXTERNAL MEMORY (memory card).

(6) Do one of the following (if necessary):

• For LOAD operations, press the field that contains the name of the file you wish to load.
Use the ◀ ▶ fields if the desired file is not currently displayed.

• For SAVE operations, enter a name for the file you are about to save.

• For DELETE operations, select the file you wish to dispose of.

• For FILE COPY operations, select the file you wish to copy.

• For other operations, see page 181.

(7) If available, press the EXECUTE field.

(8) Press the EXIT button to return to the main page.

In the following, we will use the word "media" to refer to the three memory areas available to the E-60/E-50 (internal memory area, floppy disk, memory card).

Loading data

The LOAD functions allow you to load Songs, Music Styles, User Program Sets and MIDI Sets. Songs and Styles can also be loaded via dedicated functions, which are explained elsewhere (page 110, 73). The behavior of those pages is identical to that of the LOAD function, so we won't explain those operations again.

Note: Never remove the floppy disk or memory card while the operation is in progress. Wait for the confirmation to appear before returning to business as usual.

■Load User Program Set

This is where you can load User Program "Sets". As stated on page 88, such Sets (or Lists) do not contain the registration data but only references to them. Please bear in mind that a User Program Set can only refer to User Programs that reside on the same media as the List itself. The name of the selected Set is displayed next to a folder icon on the USER PROGRAM page that appears when you press the [LIST] button.

All User Programs (as well as the songs they refer to) need to be on-line. That explains why the [FLOPPY] field is not available here.

(1) Press the [DISK&MEDIA] button.

(2) Press the [LOAD] field, followed by the [USER PROGRAM SET] field.

(3) Select the source media: [INTERNAL MEMORY] or [EXTERNAL MEMORY] (memory card).

(4) Press the field of the User Program Set file you wish to load.
     If the desired name is not displayed, use the scroll bar to the right of the list (if available) to scroll further down.
     Note: A User Program Set also contains all GLOBAL parameters (see the list in the "Parameter Reference" booklet). So be sure to save the current settings before loading a User Program Set (see "Save User Program Set").

(5) Press the [EXECUTE] field to load the data.

■Load MIDI Set

This is where you can load MIDI Set "Sets". i.e. groups of 8 MIDI Sets that overwrite the contents of the internal MIDI Set memories.

(1) Press the [DISK&MEDIA] button.

(2) Press the [LOAD] field, followed by the [MIDI SET] field.

(3) Select the source media: [INTERNAL MEMORY], [EXTERNAL MEMORY] (memory card) or [FLOPPY] (disk).

(4) Press the field of the MIDI Set whose data you wish to load.
     If the desired name is not displayed, use the scroll bar to the right of the list (if available) to scroll further down.
     Note: This function always replaces the contents of all 8 internal MIDI Set memories.

(5) Press the [EXECUTE] field to load the data.
     Note: The E-60/E-50 does not support MIDI Sets of other Roland instruments.

Saving data

Note: When saving files to floppy disk whose capacity is too small for the data you wish to save, the E-60/E-50 will display a "DISK ERROR" message. That does not necessarily mean that the disk is damaged.

Important remark

If you select the media that contains the original version of the file you are about to save, the following message is displayed:

● Press the [YES] field to overwrite the old version.
   —or—
● Press the [NO] field if you do not want to overwrite this file and return to the SAVE page instead. Then, enter a different name (or select a different media).

Note: Never remove the floppy disk or memory card while the operation is in progress. Wait for the confirmation to appear before returning to business as usual.

■Save User Program Set

This function allows you to save the Set (List) currently assigned to the USER PROGRAM buttons. This also includes all GLOBAL parameters (see the list in the "Parameter Reference" booklet).

You can also use this function to copy the Set along with all User Programs (i.e. the registration data) it refers to from one media to another.

(1) Press the DISK&MEDIA button.

(2) Press the SAVE field, followed by the USER PROGRAM SET field.

(3) Select the target media: INTERNAL MEMORY or EXTERNAL MEMORY (memory card).
Note: User Program Sets cannot be saved to floppy disk.

(4) Enter the name for the file.

- Use the ◄ and ► fields to select the position for which you wish to enter a new character.

- Use the alphanumeric keypad to enter the desired characters. This keypad works exactly like the keypad of a cellphone: you may have to press an alphanumeric field several times to select the desired character or number.

- The A/a field allows you to switch between uppercase and lowercase characters.

- The Delete field allows you to delete the character indicated by the cursor. Press and hold it to clear all characters.

- Press Space to insert a blank (or the number "0").

- If you forgot to insert a character, use ◄ or ► to select the position where the missing character should be inserted. Then press Insert, followed by the character you wish to insert.
Note: The E-60/E-50 supports both upper- and lower-case letters for file names. So choose whichever is more convenient (or clear).

Note: The E-60/E-50 allows you to use long file names, but some windows are relatively short, so that only part of the names can be displayed. We therefore suggest using short file names (maximum 18 characters) whenever possible.

(5) Press the EXECUTE field to save the data.
Note: Saving User Program Sets may take in excess of 10 minutes (especially if the target media already contains several sets). This is due to the fact that the Database information needs to be updated for User Program Finder use. Do not switch off the E-60/E-50 while this operation is in progress.

■Save MIDI Set

After programming 8 MIDI Sets, you may find that you need a few more and that you have to make room for the new MIDI Sets. To do so without losing existing MIDI Sets, you must save the "old" set. Even if you do not program more than 8 MIDI Sets, it is a good idea to make a backup copy of your MIDI Sets.

This function allows you to save all 8 MIDI Sets as a set.

(1) Press the DISK&MEDIA button.

(2) Press the SAVE field, followed by the MIDI SET field.

(3) Select the target media: INTERNAL MEMORY, FLOPPY (disk) or EXTERNAL MEMORY (memory card).

(4) Enter the name for the file.
See "Save User Program Set".

Note: The E-60/E-50 supports both upper- and lower-case letters for file names. So choose whichever is more convenient (or clear).

(5) Press the EXECUTE field to save the data.

■Save Song

This page allows you to save the song that is currently in the E-60/E-50's RAM memory. Even if it is not a newly recorded song, there are several reasons why you may want to use this function:

- to save the changes you made using the MAKEUP TOOLS and/or COVER functions (see page 102 and following);

- to save the newly programmed MARK JUMP locations (see page 109);

- to save a song under a different name or to a different media.
Note: The SONG MAKEUP/COVER and MARK JUMP settings can only be read by the E-60/E-50 and are thus of no use to other sequencers or SMF players.

(1) Press the DISK&MEDIA button.

(2) Press the $\boxed{\text{SAVE}}$ field, followed by the $\boxed{\text{SONG}}$ field.

(3) Select the target media: $\boxed{\text{INTERNAL MEMORY}}$, $\boxed{\text{FLOPPY}}$ (disk) or $\boxed{\text{EXTERNAL MEMORY}}$ (memory card).
Select $\boxed{\text{INTERNAL MEMORY}}$ or $\boxed{\text{EXTERNAL MEMORY}}$ if you wish to take advantage of the Song Finder function (page 35).

(4) Enter the name for the file.
See page 177.

Note: The E-60/E-50 supports both upper- and lower-case letters for file names. So choose whichever is more convenient (or clear).

(5) Press the $\boxed{\text{EXECUTE}}$ field to save the data.

■**Save Style**
This page allows you to save the Style that is currently in the E-60/E-50's RAM memory. Even if it is not a newly recorded Style, there are other reasons why you may want to use this function:

• to save the changes you made using the MAKEUP TOOLS and/or COVER function (see page 102 and following);

• to save a Style under a different name or to a different media.

(1) Press the $\boxed{\text{DISK\&MEDIA}}$ button.

(2) Press the $\boxed{\text{SAVE}}$ field, followed by the $\boxed{\text{SONG}}$ field.

(3) Select the target media: $\boxed{\text{INTERNAL MEMORY}}$, $\boxed{\text{FLOPPY}}$ (disk) or $\boxed{\text{EXTERNAL MEMORY}}$ (memory card).
Select $\boxed{\text{INTERNAL MEMORY}}$ or $\boxed{\text{EXTERNAL MEMORY}}$ if you wish to take advantage of the Style Finder function (page 73).

(4) Enter the name for the file.
See page 177.

Note: The E-60/E-50 supports both upper- and lower-case letters for file names. So choose whichever is more convenient (or clear).

(5) Press the $\boxed{\text{EXECUTE}}$ field to save the data.

Rename functions

Use the Rename functions to change the name of the selected User Program Set, Style, Song or MIDI Set.

Styles and Songs can also be renamed via their respective Finder. User Program Sets and MIDI Set "sets", however, can only be renamed here.

WARNING: Changing the name of a song or Style is usually dangerous. Song files can be referenced by Play Lists and User Programs (Link function). If you change their names here, such songs are no longer loaded when they should.

Similarly, Music Styles can be assigned to CUSTOM memories. By changing their name, you also "estrange" them from the CUSTOM memories that refer to them.

The procedure is the same for all file types you can rename, so we will describe the steps only once.

(1) Press the $\boxed{\text{DISK\&MEDIA}}$ button.
The display changes to:

(2) If you intend to work with a floppy disk or memory card, insert it into the drive or slot.

(3) Press the $\boxed{\text{RENAME}}$ field.

(4) Select the data type you want to rename by pressing its field.

The display changes to:

User Program Set and MIDI Set files only have a file name you can change. As there is no Finder functionality for such files, the display looks a little different:

(5) Select the media: INTERNAL MEMORY, FLOPPY (disk) or EXTERNAL MEMORY (memory card).

(6) If available and necessary, use the sorting functions and/or the Finder.
These functions are only available for songs and Styles – and only if you select INTERNAL MEMORY or EXTERNAL MEMORY. See also pages 34 and 73.

(7) Press the field of the file you want to rename.
The display changes to:
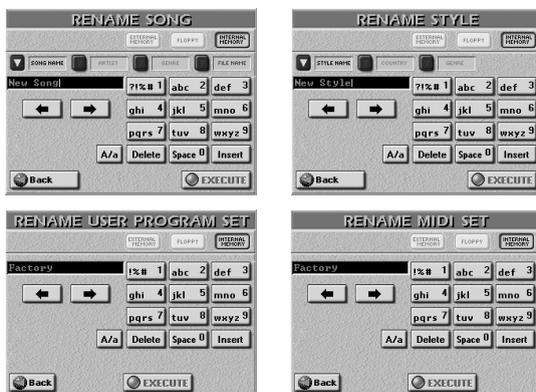
If you selected the RENAME page by accident, press Back. This takes you back to the previously selected page.

(8) If available (and necessary), press the STYLE NAME, COUNTRY/ARTIST, GENRE or FILE NAME field and enter the desired characters. See page 177 for how to enter characters.
Note: The E-60/E-50 supports both upper- and lower-case letters for file names. So choose whichever is more convenient (or clear).
Note: The E-60/E-50 allows you to use long file names, but some windows are relatively short, so that only part of the names can be displayed. We therefore suggest using short file names (maximum 18 characters) whenever possible.

(9) Press the EXECUTE field to confirm your settings and rename the file.
Note: Never remove the floppy disk or memory card while the operation is in progress. Wait for the confirmation to appear before returning to business as usual.

(10) Press the EXIT button to return to the main page.

Delete

Use these functions to delete the selected User Program Set, MIDI Set "set", song or Music Style from the internal memory, a memory card or floppy disk.

Carefully check whether you selected the right file type and the right file before pressing EXECUTE. Deleted files cannot be restored.

Also note that MIDI Sets contain 8 different settings, which means that you may lose a lot more than originally intended. And if you delete a song that is used in a Play List, that list changes (loses one step), while a User Program whose Link function you activated no longer finds the required song.

On the other hand, deleting a User Program Set only does away with the List and GLOBAL settings – the User Programs it refers to remain intact.

(1) Press the DISK & MEDIA button.

(2) If you intend to work with a floppy disk or memory card, insert it into the drive or slot.

(3) Press the DELETE field.

(4) Select the data type you want to delete by pressing its field.

The display changes to:

For User Program Set and MIDI Set files, the display looks as follows:

(5) Select the media: INTERNAL MEMORY, FLOPPY (disk) or EXTERNAL MEMORY (memory card).

(6) If available and necessary, use the sorting functions and/or the Finder.
These functions are only available for songs and Styles – and only if you select INTERNAL MEMORY or EXTERNAL MEMORY. See also pages 34 and 73.

If you like, you can select several songs or Styles for deletion by pressing the corresponding lines. Use the PAGE ◄► fields to changes pages.

To delete all songs or Styles on the selected media, press the ALL FILES field. This disposes of all files on all pages.

(7) Press the field of the file you want to delete.

(8) Press the EXECUTE field.
The display changes to:

DELETE SONG

DELETE STYLE

DELETE USER PROGRAM SET

DELETE MIDI SET
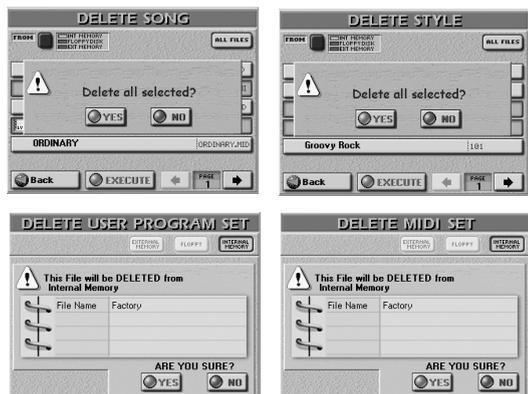
If you selected the DELETE page by accident, press NO. This takes you back to the previously selected page.

(9) Check again whether you really selected the file you wanted to delete (if possible), then press the YES field to delete the selected file.
Press the NO field to return to the DELETE list without deleting the file. You can also press Back to return to the DELETE page.

(10) Press the EXIT button to return to the main page.
Note: The DELETE operation cannot be undone.

Copy

The E-60/E-50 allows you to copy one, several or all files from one media to another. Files on the selected source media (FROM) cannot be copied onto the same destination media (TO). Consider using the USB functionality (see p. 184) when you need to copy from a memory card (in the E-60/E-50) to another memory card (connected to the computer), for example.

(1) Press the DISK&MEDIA button.

(2) If you intend to work with a floppy disk or memory card, insert it into the drive or slot.

(3) Press the FILE COPY field.

(4) Select the data type you want to copy by pressing its field.

SONG   STYLE

MIDI SET   USER PROGRAM SET

The display changes to:

COPY STYLE

%SLROCK2	64
Cool Live Band	92
New Style	92
Smile Pop	100
Groovy Rock	101
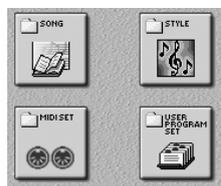
Note: See page 97 for how to copy individual User Programs. Here, you can only copy Sets (the List file as well as the User Program files it refers to).

If you selected the wrong file type, press Back and try again.

(5) Start by specifying the source that contains the files you wish to copy: Press the FROM button icon to select the memory area.

INT MEMORY: The E-60/E-50's internal memory area.

EXT MEMORY: The memory card in the E-60/E-50's PCM-CIA slot. Do not forget to insert it before selecting this option.

FLOPPY DISK: The disk in the E-60/E-50's floppy drive.

(6) Now specify the target you wish to copy the selected files to: Press the TO button icon to select the destination media.
Note: FROM and TO cannot be set to the same media (you cannot copy FROM INTERNAL MEMORY→ TO INTERNAL MEMORY, for example).

(7) If the name of the file you want to copy is already displayed, press its line.
You can also select several files.

(8) To display the next 5 files, press the → field in the lower right corner.
You can press this field as many times as necessary (or until it is no longer displayed). To return to a previous group of 5 files, press ←.

(9) If you need to copy all files (on all available pages), press the ALL FILES field.
Note: If the memory card or floppy disk is not formatted, a message will be displayed that allows you to format it before the files are copied.

(10) If you chose "EXT MEMORY" for "TO", disable the card's write protection (if available) and insert it into the PCMCIA slot. See the owner's manual of the memory card for how to disable its write protection.
If you chose "FLOPPY DISK" for "TO", disable its write protection (see p. 11) and insert it into the drive.

(11) Press the EXECUTE field.

You are asked whether it is OK to overwrite all files on the destination media ("TO") that have the same file names as the files you are about to copy.

(12) Press the YES field if it is OK to overwrite files with the same names on the destination media. Press the NO field if files on the source ("FROM") media that have the same name as existing files on the destination ("TO") media should not be copied (only files with "original" names will be copied in that case).

The data are copied and a message confirms the end of the operation.

Note: Never remove the floppy disk or memory card while the operation is in progress. Wait for the confirmation to appear before returning to business as usual.

(13) Press the EXIT button to return to the main page.
Note: If the (remaining) storage capacity is smaller than the size of the files you wish to copy, the E-60/E-50 automatically stops the operation without displaying a message as soon as the media is full. Always check the contents of the destination media immediately after the copy operation to make sure that all required files have been copied.

Format

This function allows you to format the inserted floppy disk or memory card. For safety reasons, you cannot format the internal memory (because it also contains the E-60/E-50's operating system).

It would be a good idea to also format floppy disks formatted for MS-DOS®, because that speeds up data access. **Memory cards must always be formatted on the E-60/E-50:** during formatting, the E-60/E-50 indeed also creates a number of folders where your various files will be stored.

(1) Defeat the disk's or memory card's write protection (if available):

Floppy disk: Close the little "window" (page 11).

Memory card: See its owner's manual (this depends on the kind of card you are using).

(2) Insert the floppy disk into the drive or the memory card into the PCMCIA slot.

(3) Press the DISK&MEDIA button.

(4) Press the FORMAT field.
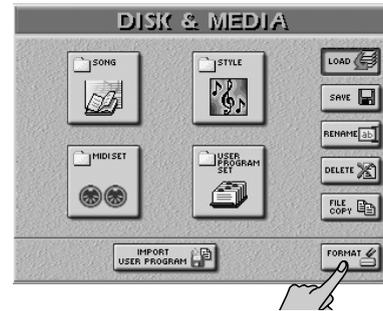
The display changes to:
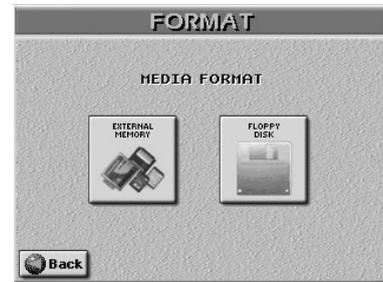
(5) On the display page that appears now, press the EXTERNAL MEMORY or FLOPPY DISK field. This obviously depends on whether you inserted a floppy disk or a memory card.
The display now responds with:

(In the case of a floppy disk, the "External Memory" message will read "Floppy Disk", of course.)

(6) Press the YES field to format your disk/card. Press NO or Back to return to the FORMAT display page without formatting.

(7) Wait for the confirmation to appear, then press the EXIT button to return to the main page.
Note: Never remove the floppy disk or memory card while the operation is in progress. Wait for the confirmation to appear before returning to business as usual.

Import User Program function

The E–60/E–50 allows you to import User Programs or Performance Memories created with a VA–76/VA–7 or G–1000/EM–2000. User Program Sets created on an E–80 or G–70 can be opened straight away and don't need to be converted.

Note: In the following, the word "User Program" also refers to the G–1000's Performance Memories.

Here is what happens when you import User Program sets from a floppy disk:

Action	Instrument
The 128 (VA) or 192 (G/EM) User Programs are imported into the E–60/E–50's Finder database (no List is created).	VA–76/VA–7, G–1000/EM–2000
The VariPhrase data are ignored	VA–76/VA–7
Tone and MFX type selection are adapted to the E–60/E–50's sounds/algorithms.	VA–76/VA–7, G–1000/EM–2000
The parameters of the Delay effect are ignored.	VA–76/VA–7, G–1000/EM–2000
The EQ parameters are ignored.	VA–76/VA–7, G–1000/EM–2000
Any other differences are either adapted or ignored.	VA–76/VA–7, G–1000/EM–2000

Note: User Programs created on or imported into the E–60/E–50 cannot be exported in the VA/G/EM-series format.

During the conversion, the E–60/E–50 creates a text file called "Import_UPG_Report" that allows you to keep track of the conversions. This file can be found in the "Text" folder of the E–60/E–50's internal memory. The information it contains is structured as follows:

```
①  →   - Do not delete nor edit this File -
②  →   ---- G70 User Program conversion number 01
       from VA/VA7 Set (VA7upg.UVA) ----
③  →   -│Free_Pnl│-->│Free_Pnl_01-001.upg│ ←── ④
       - Free_Pnl --> Free_Pnl_01-002.upg
       - Free_Pnl --> Free_Pnl_01-003.upg
       - Free_Pnl --> Free_Pnl_01-004.upg
       - ::            ::           ::
       - Free_Pnl --> Free_Pnl_01-127.upg
       - Free_Pnl --> Free_Pnl_01-128.upg

②  →   ---- G70 User Program conversion number 02
       from G1000 Set (G1000upg.UPS) ----
③  →   -│MYBABYJU│-->│MYBABYJU_02-001.upg│ ←── ④
       - YOUMENEE --> YOUMENEE_02-002.upg
       - - ::           ::          ::
       - MYBABYJU --> MYBABYJU_02-191.upg
       - MYBABYJU --> MYBABYJU_02-192.upg
```

You can transfer that file to your PC via USB. See page 184 for how to establish the required connection and transferring the file to your computer. (Note that the information has no effect on the imported User Programs – it is merely intended as a log that may help you find a given User Program more quickly.)

① Tells you not to modify or delete the file in the E–60/E–50's "Text" folder if you want the conversion report to be updated at every import session.

② Number of the conversion session since the creation of this text file; Source instrument ("VA/VA7"= VA–76/7, "G1000"= G–1000/EM–2000); Name of the converted User Program set file

③ Original name of the User Program

④ Name of the converted User Program
The first number ("01", "02", etc.) refers to the conversion session. This may help you tell User Programs with identical names (from different conversion sessions) apart. The second number ("-001", "-002") etc. refers to the original User Program memory (the VAs have 128, the G–1000 and EM–2000 have 192).

Note: After 99 conversion sessions, the import counter (the first two digits) is reset to "01".

(1) Insert the floppy disk with the User Program/Performance Memory set you wish to convert into the drive.
The E–60/E–50 can import User Programs of the following instruments: VA–76, VA–7, G–1000 (Performance Memories), and EM–2000.

(2) Press the [DISK&MEDIA] button.

(3) Press the [IMPORT USER PROGRAM] field.

The display changes to:

(4) In the right column, press the field that corresponds to the instrument whose User Programs you want to import:
[VA–7/VA–76] refers to the VA-series, while [G–1000] represents the G–1000 and EM–2000. This selection specifies the algorithm the E–60/E–50 will use for the conversion (User Program set files contain no clue about the instrument that generated them).

Note: The User Programs you want to import must reside on a floppy disk and be bundled as a set.

(5) Select the target media for the imported User Programs using the [TO] field: INT MEMORY or EXT MEMORY (memory card).

(6) Press the field of the file whose User Programs you want to import.

(7) Check again whether you really selected the file you want to import, then press the EXECUTE field to start the import operation.
This may take a while, because the conversion requires quite a few calculations. Furthermore, the User Program Finder database needs to be updated.

Be sure to wait until the "Operation Successful" message appears.

Note: The E-60/E-50 creates no List file. The newly acquired User Programs can be selected via the Finder, though – or assigned to one of the 144 memory slots of the currently active List.

(8) Press the EXIT button to return to the main page.

16. Archiving data using a computer (USB)

The E-60/E-50's USB port can be used for exchanging files with a computer or for MIDI communication. Here, we will look at the archiving functions, which are often called "Data Storage". See page 187 for the MIDI functions.

You can transfer the following file types from the internal memory or a memory card to your computer – and vice versa:

Styles	User Programs
Songs (.SMF files)	.txt files*

[*] These files reside in dedicated folders and should only be put there. See step (12) below.

The following computers and operating systems are supported:

IBM PC-compatible: Windows 98SE/Me/2000/XP or later

Apple: MacOS 9.04 or later

Note: The E-60/E-50 does not handle or generate audio files.
Note: The USB cable needed for this connection is optional.

(1) Disconnect the E-60/E-50's USB port from your computer (if it is connected).
(2) (For Windows XP:) If a message asks you to restart your computer, do as directed.
(3) Switch on the E-60/E-50.
(4) Use a USB cable to connect the E-60/E-50 to your computer.

To the/a USB port of your computer
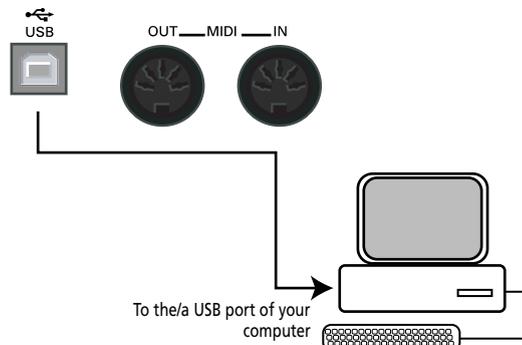
Note: Always connect the E-60/E-50 directly to your computer or to a powered USB hub.

(5) Press the MENU button.

The display changes to:

(6) Press the USB DATA STORAGE field.
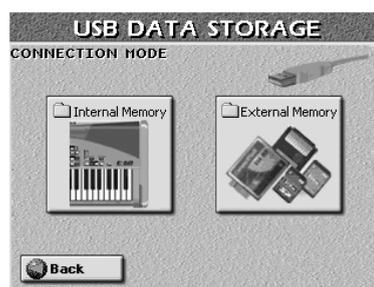
Now you need to specify which memory area should appear on the computer's desktop:

(7) Press Internal Memory or External Memory (memory card) to activate the connection with your computer.
Depending on the area you choose, the display now looks as follows...

...or like this:

Note: In this state, all of the E-60/E-50's panel functions are blocked. You can, however, keep playing the last Keyboard part(s) you selected. But you cannot select other sounds (or parts).

(8) Open the "My Computer" window (Windows).

(9) Check whether your computer found a "E50-E60_SSD", "E50-E60_CARD" or just "Removable Disk" drive.

(10) Open that drive by double-clicking on its icon.

(11) Open the folder you need.

This depends on whether you want to copy/add songs, Music Styles, User Programs or text files:

📁 Chain	X	Only to computer (and only copy)
📁 DB	X	Please ignore.
📁 Demo	X	Please ignore.
📁 Midiset	X	Please ignore.
📁 Put New MusicAssistants Here		To and from computer.
📁 Put New Songs Here		To and from computer.
📁 Put New Styles Here		To and from computer.
📁 Put New UserPrograms Here		To and from computer.
📁 ROMStyle	X	Please ignore.
📁 Song	X	Only to computer (and only copy)
📁 Style	X	Only to computer (and only copy)
📁 Text		To and from computer.
📁 Update	X	Please ignore.
📁 Userprg	X	Only to computer (and only copy)

(12) Do one of the following:

• Copy the desired Music Styles from the "Styles" folder to your computer's hard disk using drag & drop.
To copy Styles from your computer to the E-60/E-50, drag & drop them over the "Put New Styles Here" folder.

• Copy the desired songs from the "Song" folder to your computer's hard disk using drag & drop.
To copy songs from your computer to the E-60/E-50, drag & drop them over the "Put New Songs Here" folder.

• Copy the desired User Programs from the "Userprg" folder to your computer's hard disk using drag & drop.
To copy User Programs from your computer to the E-60/E-50, drag & drop them over the "Put New UserPrograms Here" folder.

To copy User Programs from your computer to the E-60/E-50 and immediately create associated Music Assistant entries, drag & drop them over the "Put New Music Assistants Here" folder. (That folder is not available on memory cards, because Music Assistant entries must always reside in the E-60/E-50's internal memory.)

• Copy the desired text files from the "Text" folder to your computer's hard disk –and vice versa– using drag & drop.
Note: Never ever remove or rename files via USB (use only the E-60/E-50's functions to this effect).

While data are being transferred, the E-60/E-50's display looks as follows and all buttons are locked:
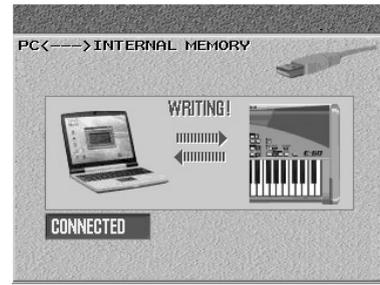
(On the E-50, the picture looks slightly different.)

Note: Never switch off the E-60/E-50 while this message is displayed, because doing so would damage all data in the selected memory area.
Note: Never sever the USB connection while the "WRITING" message is displayed (the message shown on the computer screen may disappear earlier but should not be trusted in this case). Doing so would damage all data in the selected memory area.

Cautions regarding folders and files

• Only the following types of files may be transferred between the E-60/E-50 and your computer:
Standard MIDI Files (.MID)
Song files with the ".KAR" extension
User Program Files (.UPG)
Music Styles (.STL)
Text files (.TXT) for Lyrics synchronization (see p. 120)

• Do not move, rename or delete folders of the connected memory area using your computer mouse (or other commands).

• Never add files to folders flagged with an "X" in the illustration above.

• Never copy files to the root directory of the E-60/E-50's internal memory or card – and never rename or delete files you see there.

• Never format, optimize or scan the E-60/E-50's memory area using your computer's tools.

• The E-60/E-50 can only handle file names consisting of single-byte alphanumeric characters (i.e. no Russian, Chinese, Japanese, Korean, etc., names).

• Be sure to only use files whose names do not exceed 32 characters.

• In some cases, the new songs, Styles or User Programs you copied to the corresponding "Put New… Here" folder may not be visible to the corresponding Finder right away. If that occurs, briefly select the "other" memory area (memory card or internal memory), then return to the originally selected memory area.

(13) To disconnect the E-60/E-50 from your computer:
• Macintosh: Drag the "E50-E60_SSD", "E50-E60_CARD" or "Removable Disk" icon to the trash.
—or—

- Windows: Click on the removal icon on the task bar. Wait until a drop-down menu appears and select the entry that says something to the effect of "Stop USB disk **E50-E60_SSD**" or "Stop USB disk **E50-E60_CARD**". You should now see a window that says something to the effect of "The USB device XX can now be safely removed from the system". Click on the [OK] button.
  —THEN—
- Disconnect the USB cable from your computer and the E-60/E-50.

(14) Press the ⬚DISCONNECT field in the E-60/E-50's display to return to the CONNECTION MODE page.

(15) Press the ⬚EXIT button to return to the main page.

Backing up all of the E-60/E-50's data

You can make a backup copy of all of the E-60/E-50's internal data (or the contents of a memory card) by proceeding as follows:

- Connect the E-60/E-50 to your computer.
- On your computer, create a folder named "Backup" (or any other name).
- Double-click the icon assigned to the E-60/E-50's internal memory or memory card to open its window.
- Select its entire contents (Ctrl + A or Command + A).
- Drag the selected files to your "Backup" folder icon and drop them there.
- Wait until all files have been copied.

  To send the files back to the E-60/E-50 (or its memory card):

- Open the "Backup" folder on your computer hard disk.
- Open the window of the E-60/E-50's internal memory or memory card.
- Arrange the two windows in such a way that you can drag files from "Backup" to "**E50-E60_SSD**" or "**E50-E60_CARD**".
- Return to the "Backup" folder and select its entire contents (Ctrl + A or Command + A).
- Drag all selected folders to the "**E50-E60_SSD**" (or "**E50-E60_CARD**") window and release the mouse key.
- Wait until the operation is completed.
- Disconnect the E-60/E-50 from your computer (see above).

Just in case...

- **Factory data**
  The E-60/E-50's factory data (User Programs, MIDI Sets, Styles) can be found on the supplied CD-ROM. Please see the instructions in the document called "Recovery_PC.html" or "Recovery_Mac.html" on that CD-ROM (depending on the computer system you are using) for how to proceed.
  Always make a backup copy of the E-60/E-50's internal memory before transferring data from the CD-ROM, because the contents of the E-60/E-50's internal memory is erased.

- **System updates**
  The supplied CD-ROM also contains two files called "SystemUpdate_PC.html" and "SystemUpdate_Mac.html" that explain how to install a new system version you may have downloaded from www.rolandkeyboardclub.com.

17. MIDI

MIDI is short for "Musical Instrument Digital Interface". The acronym refers to many things, the most obvious being a connector type that is used by musical instruments and other devices to exchange messages relating to the act of making music.

When you play on the E-60/E-50's keyboard or start song or Style playback, your instrument transmits MIDI data to its MIDI OUT socket (or to the USB port). If you connect that socket to the MIDI IN socket of another instrument, the external instrument may play the same notes as one of the E-60/E-50's parts, select sounds, etc.

MIDI is a universal standard, which means that musical data can be sent to and received by instruments of different types and manufacturers. Furthermore, MIDI allows you to connect your E-60/E-50 to a computer or hardware sequencer. (You can also use the USB port for MIDI applications.)
Connect your E-60/E-50 as shown below.

The E-60/E-50 receives data
External MIDI instrument/computer (*)
E-60/E-50
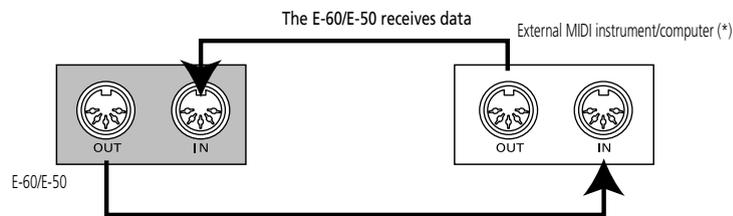
(*) MIDI communication via the USB port is also possible.

MIDI can simultaneously transmit and receive messages on 16 channels, so that up to 16 instruments can be controlled. Nowadays, most instruments –like your E-60/E-50– are multitimbral, which means that they can play several parts simultaneously with different sounds.

Note: All E-60/E-50 parts are set to receive MIDI messages. If they do not seem to respond to the messages you send from the external controller, check the MIDI connections and the channel settings on the E-60/E-50.

The transmit and receive channels of the Keyboard parts are set as follows:

Keyboard part	Recorder track
UP1	4
UP2	6
LWR	11
MBS	12
MELODY INT	15

The how-to's

Accessing the MIDI functions
Do the following to gain access to the MIDI functions:

(1) Press the MENU button.
The display changes to:

(2) Press the MIDI field.

(3) Press the OUTPUT MIDI or USB field to specify which socket(s) to use for MIDI applications.
The MIDI and USB options are mutually exclusive: if you select "USB", the MIDI sockets are not used, while MIDI communication via USB is impossible when you select "MIDI".

• The E-60/E-50 is supplied with a CD-ROM that contains the driver files you may need to install on your computer for USB–MIDI applications. Before pressing the USB field, you must install the required drivers on your computer.
See the operating instructions on the CD-ROM.

(4) Do one of the following:

• Press a MIDI SET 1~8 field to select a MIDI Set.

• Press the SELECT field that corresponds to the section whose default settings you want to load. These two fields can be used instead of a MIDI Set.
If you press Keyboard&Style Parts, the Song parts no longer receive/transmit MIDI messages. If you press Song Parts, the Keyboard and Style parts no longer transmit MIDI messages.

• Press the EDIT field to gain access to the MIDI parameters. Next, use the PAGE ◀ ▶ fields to select the part or section whose settings you want to change.

(5) After changing MIDI parameter settings, press the WRITE field to write them to a MIDI Set (page 193).

(6) Press the EXIT button to return to the main page.

Working with presets

The opening MIDI page contains two big fields with preset settings. All you need to do is press them to restore the default settings for the sections or aspects in question.

Keyboard&Style Parts: This field recalls the factory MIDI settings for the Keyboard parts (UP1/2, LWR, MBS, MELODY INT) and the Style parts (ADrum, ABass, Acc1~6). The most important (and practical) use for this field is resetting the MIDI transmit/receive channels of the Keyboard and Style parts and to switch off MIDI transmission/reception of the Song parts.

Note: This field applies to both reception (RX) and transmission (TX). The E-60/E-50 indeed allows you to set separate TX and RX channels for each part.

Song Parts: This field restores the factory settings for the E-60/E-50's Song parts and switches off the MIDI transmission and reception of the Keyboard and Style parts.

MODE Local On/Local Off: These settings allow you to establish or remove the connection between the E-60/E-50's keyboard/Arranger/Recorder and the internal tone generator.

If you select Local On (default), playing on the E-60/E-50's keyboard or playing back a song/Style causes the corresponding notes to sound. If you select Local Off, the corresponding MIDI messages are no longer sent to the internal tone generator – but they are still transmitted to the MIDI OUT socket (or USB port) and hence to external MIDI instruments.
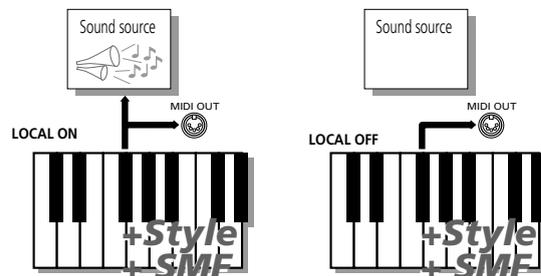
When you press one of these fields, the number of the currently selected MIDI Set is indicated with an asterisk (*) to signal that the current settings no longer correspond to the written settings. See p. 193 for details about the MIDI Sets.

Editing procedure

(7) Press the EDIT field on the first MIDI page.

(8) On the page that appears now, select the section whose parameters you wish to edit:

Synchronization, general settings
Refers to the Recorder/sequencer parts
Refers to the Style parts
Keyboard parts (including MELODY INTELL)
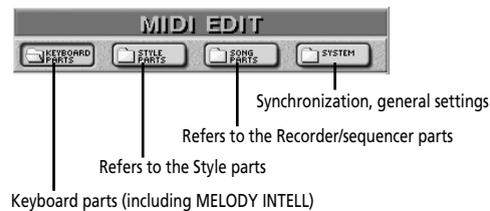
(9) Use the PAGE ◀ ▶ buttons to select the part you want to edit.

(10) Press the field of the parameter you wish to edit and set the desired value with the DATA/ENTRY dial or the DEC/INC buttons.

(11) Press the Back field and save your MIDI settings to a Set; —or—
Press the EXIT button to return to the main page.

Editing MIDI parameters

Let us briefly explain where to look for the part you want to edit (use PAGE ◄► to select it):

KEYBOARD	STYLE	SONG	SYSTEM
UP1, 2	ADrums	Part1~16	Sync
LWR	ABass		Basic Channel
MBS	Accomp1		Style Channel
MELODY INT	Accomp2		NTA
	Accomp3		V-LINK
	Accomp4		Param
	Accomp5		
	Accomp6		

Note: Always select the part you want to edit **before** changing the available parameters.

Keyboard, Style, Song parts

The Keyboard, Style and Song parts have the same "TX" (transmission) and "RX" (reception) parameters, so we will discuss them only once, except where there are significant differences.

Note: Press the INIT SINGLE VALUE field to recall the default setting for the parameter that is currently selected (whose display field "lights").

TX ON, RX ON

These two button icons allow you to specify whether (lights) or not (dark) the part whose name appears in the upper left corner should transmit (TX) or receive (RX) MIDI data.

MIDI TX

■CHANNEL (1~16)

Allows you to assign a MIDI transmit channel to the selected part. Unless you have a very good reason to do otherwise, we suggest using the same TX and RX channel numbers for a part.

Note: Assigning the same channel to two or more parts is usually not a very good idea.

■LOCAL

This is where you can disconnect the part from the internal sound source ("OFF") – or re-establish that connection ("ON"). You can also change the LOCAL setting of all parts simultaneously using MODE Local On/Local Off on the first MIDI page.

■SHIFT (–48~48)

This parameter allows you to transpose the note messages before they are transmitted to an external MIDI instrument or computer. The maximum possible transposition is four octaves up (48) or down (–48). Each step represents a semi-tone.

TX EVENT

The TX section provides a number of filters that allow you to specify whether the messages in question should be transmitted (ON) or not (OFF).

Press the TX EVENT field to open the following pop-up window:

Press the ALL field to switch all button icons on (the corresponding messages are then transmitted). Press NONE to switch all button icons off. Press CLOSE to return to the page where you came from. You can also switch the following button icons on/off individually:

● PROGRAM CHANGE—Program change and bank select (CC00, CC32) messages. These messages are used to select sounds and Drum Sets (as well as User Programs, see below). "Bank Select" messages are control change messages, which were added when it became clear that the number of sounds that can be selected using program change messages (128) was no longer sufficient to access all sounds of a given instrument. (The E-60/E-50 boasts over 1590 sounds.)

● PITCH BENDER—Pitch Bend messages.
● MODUL—Modulation messages (CC01).
● VOLUME—Volume messages (CC07).
● PANPOT—Pan(pot) messages (CC10).
● EXPRESSION—Expression messages (CC11).
● HOLD°—Hold (Sustain, Damper) messages (CC64).
● SOSTENUTO°—Sostenuto messages (CC66).
● SOFT°—Soft messages (CC67).
● REVERB—Reverb Send messages (CC91).
● CHORUS—Chorus Send messages (CC93).
● RPN°—Registered parameter number (CC100/101).
● NRPN°—Non-registered parameter number (CC98/99).
● SysEx°—SysEx messages (system exclusive).
● CC16°—General purpose controller that allows you to influence the "C1" parameter (see p. 79).

Note: TX EVENT parameters with a "°" symbol are not available for Style parts.

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MIDI RX

■CHANNEL (1~16)

Allows you to assign a MIDI receive channel to the selected part. The default settings usually work best, but you are most welcome to change them.

Note: Unless you have a very good reason to do otherwise, we suggest using the same TX and RX channel numbers for a part.

Note: Assigning the same channel to two or more parts is usually not a very good idea.

■SHIFT (–48~48)

This parameter allows you to transpose the received note messages before sending them to the E-60/E-50's tone generator. The maximum possible transposition is four octaves up (48) or down (–48). Each step represents a semitone.

■LIMIT HIGH/LIMIT LOW (C–~G9)

"LIMIT HIGH" and "LIMIT LOW" allow you to set the note range to be received. If not all note messages received on a given MIDI channel should be played by the selected E-60/E-50 part, narrow down the range.

Note: The LOW LIMIT value cannot be higher value than HIGH LIMIT (and vice versa).

RX EVENT

The data filters of the RX section allow you to specify whether (ON) or not (OFF) the messages in question should be received.

Press the RX EVENT field to open the following pop-up window:

The RX events are the same as the TX events, except for the "CAF" parameter (reception of Channel Aftertouch messages), which can be received – or filtered.

Press the Back field and save your settings to a MIDI Set; —or—

Press the EXIT button to return to the main page.

MIDI System parameters

The following MIDI parameters usually apply to the E-60/E-50 as a whole, even though some of them are rather specific, as you will notice.

Press the SYSTEM field and use PAGE ◄► to select the page that contains the parameter you want to edit.

SYNC parameters

The SYNC parameters allow you to specify whether or not the E-60/E-50 should send MIDI real-time messages when you start the Arranger or Recorder/sequencer. This allows you to synchronize external instruments or (software) sequencers with your E-60/E-50.
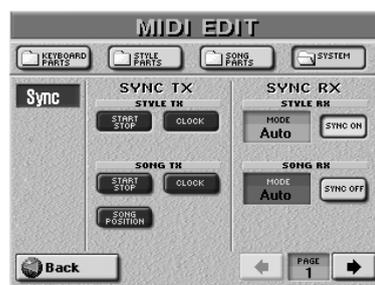
Just as a reminder: "TX" means "transmit" and "RX" stands for "receive".

■SYNC TX

● START/STOP—If you activate this option, the E-60/E-50 sends start or stop messages when you start (or stop) Arranger (STYLE) or song (SONG) playback. (The Recorder/sequencer furthermore transmits "Continue" messages.)

● CLOCK—This option means that the Arranger (STYLE) or Recorder/sequencer (SONG) sends MIDI Clock messages that tell the receiving instrument or MIDI device which tempo to choose.

● SONG POSITION (only for SONG)—If you switch this parameter on, the Recorder/sequencer sends Song Position Pointer (SPP) messages that indicate the current playback position.

Note: See your external sequencer's, etc., manual to find out whether it accepts Song Position Pointer messages.

■SYNC RX

The SYNC RX parameters allow you to specify whether and how the Arranger (STYLE) and/or Recorder/sequencer (SONG) should be synchronized to external sequencers, drum machines, etc. The available options are:

● Auto—This is a good setting for remote control of song or Style playback (using a PK-5A dynamic MIDI pedal board, for example). If the E-60/E-50 receives a MIDI Start message (FA), it waits for Clock messages that specify the tempo. If those Clock messages are not received (a PK-5A, for instance, doesn't send them), the E-60/E-50 starts playback using its internal tempo. If, however, Clock messages (F8) follow after the Start message, the E-60/E-50 uses the external tempo. You can nevertheless go on using the Recorder/sequencer or Arranger without MIDI Start/Clock messages, which is not possible when you select "MIDI".

● **Internal**—The Recorder/sequencer (SONG) or Arranger (STYLE) uses its internal tempo.

● **MIDI**—Song or Style playback can be started or stopped with MIDI real-time messages (Start, Stop, Clock) received from an external clock source.

● **Remote**—The Recorder/sequencer (SONG) or Arranger (STYLE) waits for a start message to start playback at its own tempo. When it receives a stop message, playback stops. External clock messages are ignored.

BASIC parameters

The Basic channel is used to receive and transmit Program Change and Bank Select messages for selecting User Programs, as well as for the reception and transmission of other kinds of messages that are not directly related to a specific MIDI channel (such as the PART SWITCH function, for example). Note that if you select another channel, messages intended for the BASIC parameters might also cause other parameters to change when you don't want them to.
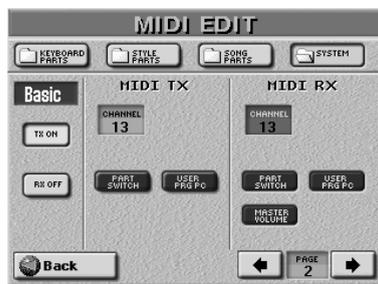
■**MIDI TX**

● **CHANNEL**—Use this parameter to assign a MIDI transmit channel to the "Basic" channel. If you don't want these messages to be transmitted, switch off the ⌐TX ON/OFF⌐ field.

● **PART SWITCH**—Whenever you mute or un-mute a part on the Mixer pages (Keyboard parts) or on the STYLE MAKEUP TOOLS/VOLUME page, your E-60/E-50 sends an NRPN message that describes your action. Not sending these messages may be useful to keep your external sequencer from recording them – or the receiving GS module from muting the part assigned to that channel.

● **USER PRG PC**—This parameter is used to enable or disable the transmission of program change and bank select messages related to User Program selection.

■**MIDI RX**

● **CHANNEL**—Use this parameter to assign a MIDI receive channel to the "Basic" channel. If you don't want these messages to be received, switch off the ⌐RX ON/OFF⌐ field.

● **PART SWITCH**—Whenever you mute or un-mute a part on the Mixer pages (Keyboard parts) or on the STYLE MAKEUP TOOLS/VOLUME page, your E-60/E-50 sends an NRPN message that describes your action. You can keep the E-60/E-50 from responding to such messages to avoid that external instruments mute its parts.

● **USER PRG PC**—This parameter is used to enable the reception of program change and bank select messages relative to User Program selection.

● **MASTER VOLUME**—This parameter allows you to enable or disable the reception of Master Volume messages that would change the E-60/E-50's overall volume. This is an exclusive message common to all newer MIDI devices.

STYLE parameters

The STYLE channel is used for receiving program change and bank select messages that select Styles and volume messages that change the Style's volume. These two message types can only be filtered in the RX column (i.e. you can specify whether or not to *receive* them).
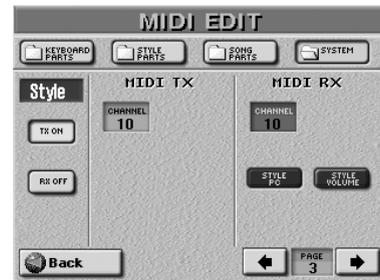
The MIDI address of a Music Style consists of three elements: a CC00 number, a CC32 number and a program change number. The values assigned to CC00 and CC32 define the Style, whereas the program change number defines the Division (Intro, Ending, etc.). See also the "Parameter Reference" booklet supplied with your E-60/E-50.

Sending only a program change number selects another Division of the currently active Style. Be aware, however, that only sending CC00 and CC32 messages (without a program change) has no effect.

Note: When you select another Style on your E-60/E-50, it transmits a CC00-CC32-PC cluster on the Style channel, which you could record using an external sequencer.

■**MIDI TX**

● **CHANNEL**—Use this parameter to assign a MIDI transmit channel to the STYLE function. If you don't want these messages to be transmitted, switch off the ⌐TX ON/OFF⌐ field.

■**MIDI RX**

● **CHANNEL**—Use this parameter to assign a MIDI receive channel to the STYLE function. If you don't want these messages to be received, switch off the ⌐RX ON/OFF⌐ field.

● **STYLE PC**—Program change and bank select messages for Style selection. Switch this button icon off if the E-60/E-50 must not select other Styles and/or Divisions.

● **STYLE VOLUME**—Volume messages relating to the Music Styles. Switch this button icon off if the E-60/E-50 must not receive them.

NTA: Note-to-Arranger

NTA notes are only received (from an external MIDI instrument). What you play in the chord recognition area of the keyboard to feed the Arranger is automatically converted to the corresponding MIDI note numbers, so that all Style parts transmit their notes to external instruments. There is thus no need to transmit the note messages of what you play in the chord recognition area (NTA) separately.
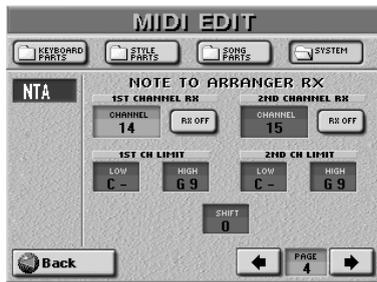
■1ST CHANNEL RX/2ND CHANNEL RX
● CHANNEL—NTA notes can be received on two MIDI channels, so that you could control the E-60/E-50's Arranger using a MIDIfied accordion (FR-7 or FR-5) or any other instrument that sends note data on two channels. Either channel can be switched off using its $\boxed{\text{ON/OFF}}$ field.
Note: You cannot assign the same MIDI channel to 1 & 2 Channel Rx.

■1ST CH LIMIT, 2ND CH LIMIT (C–~G9)
These parameters allow you to set the note range to be received. If not all note messages of the selected MIDI channel should be received by the NTA "part", set the range to the desired values.
Note: The LOW LIMIT value cannot be higher value than HIGH LIMIT (and vice versa).

If you select the V-Link part

When you select "V-LINK" on the $\boxed{\text{SYSTEM}}$ page, the display changes to:
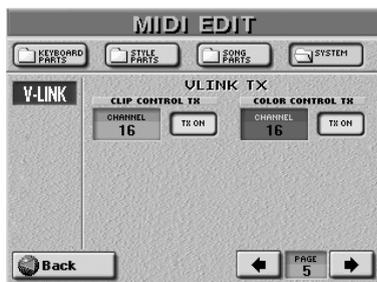
Here, you can only set TX parameters (because the E-60/E-50 only sends V-LINK messages—it does not receive them). See page 195 for details about the V-LINK functionality.

● CLIP CONTROL TX—This parameter allows you to set the MIDI channel (CHANNEL) to be used for the transmission of these messages. Use the $\boxed{\text{ON/OFF}}$ field to enable (lights) or disable (dark) transmission.

● COLOR CONTROL TX—This parameter allows you to set the MIDI channel (CHANNEL) to be used for the transmission of these messages. Use the $\boxed{\text{ON/OFF}}$ field to enable (lights) or disable (dark) transmission.

PARAM

This page contains several parameters that are not related to one another (the other MIDI pages always concentrate on one aspect).
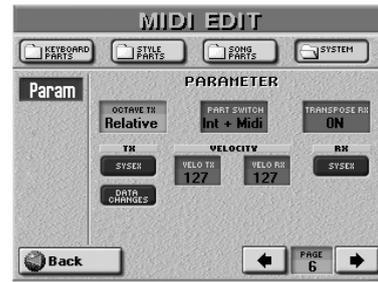
■PARAMETER
● OCTAVE TX—The OCTAVE TX parameter can be set to **Absolute** or **Relative**. You may have noticed that if you assign a bass sound to the UP1/2 part in SPLIT mode, the notes are transposed to allow you to play meaningful bass lines using the UP1/2 part. "Relative" means that this internal (and automatic) transposition is translated into MIDI note numbers.
In "Absolute" mode, however, the MIDI note numbers sent to other instruments will be the ones of the keys you actually press.

● PART SWITCH—This parameter allows you to specify whether or not a muted part should go on sending MIDI messages:

Internal: A muted part can no longer be played via the E-60/E-50's keyboard or Arranger/Recorder but continues to send MIDI messages. Selecting "Internal" and muting a part thus has the same effect as selecting "Local Off" (see p. 189).

Int+Mid: A muted part can no longer be played via the E-60/E-50's keyboard or Arranger/Recorder and no longer sends MIDI messages.

● TRANSPOSE RX (On/Off)—Use this parameter to specify whether note messages received via MIDI should be transposed.

■VELOCITY
● VELO TX, VELO RX (On, 1~127)—Your E-60/E-50 is equipped with a velocity-sensitive keyboard and a tone generator capable of responding to velocity messages. Use the fields to switch the reception (RX) or transmission (TX) of velocity messages on or off.
If you don't select "On", specify which velocity value to use instead of the continuous flux. The value you set will be used for all notes received via MIDI IN/USB (RX) or sent to MIDI OUT/USB (TX).

■TX
● SYSEX—Use this parameter to specify whether (button icon on) or not (off) the E-60/E-50 should send SysEx messages. Such messages are not standardized, so that each manufacturer can use them ad lib for temporary (or

permanent) changes to the way a part behaves. Effects parameters, for instance, can only be changed via SysEx messages.

Such messages may slow down playback on external MIDI instruments or yield no effect at all, which is why you have the option to switch off their transmission in the first place.

● DATA CHANGES—This parameter allows you to specify how the original program changes of the songs you play back are transmitted via MIDI. The E-60/E-50 may change sound addresses (usually CC00 and CC32 values) so as to play back all songs with the best possible quality. If you switch this parameter on, such real-time transformations are also transmitted via MIDI, in which case the receiving tone generator may drop certain parts (if it does not support the requested sound bank).

If you switch this parameter off, the original sound addresses are transmitted to the receiving device. (But the E-60/E-50's tone generator continues to "enhance" the songs you play back – this parameter only affects MIDI transmission to external instruments.)

■**RX**

● SYSEX—Use this parameter to specify whether (button icon on) or not (off) the E-60/E-50 should receive SysEx messages from other devices. See also the explanation above.

MIDI Sets

MIDI Sets are memories for MIDI settings. The E-60/E-50 provides eight MIDI Set memories that you can use to change your MIDI configuration. You can link a MIDI Set to a User Program (page 94) and specify which MIDI Set should be loaded when you switch on the E-60/E-50 (see below). If you need to reset some or all MIDI parameters to their default values, select Keyboard & Style Parts *and/or* Song Parts *rather than a MIDI Set.*

Writing a MIDI Set

(1) If you are still on one of the EDIT MIDI pages, press the Back field.
If not, press the MENU button and the MIDI field on the MENU display page.

(2) Press the WRITE field (it lights).
(3) Press the field that corresponds to the MIDI Set where you wish to save your MIDI settings (1~8). The display returns to the MIDI page.
(4) Press the EXIT button to return to the main page.

Using MIDI Sets

(1) Press the MENU button.
The display changes to:

(2) Press the MIDI field.

(3) Press the ⬛1⬛~⬛8⬛ field that corresponds to the MIDI Set you want to use (the two SELECT button icons go dark).
You can also select a preset ("SELECT") and work with those settings, in which case all eight MIDI Set icons go dark.

(4) Press the ⬛EXIT⬛ button to return to the main page.

MIDI Set selection at power-on
When you switch on the E-60/E-50, it automatically selects default MIDI settings. If they do not match the settings required for your setup, you can tell the E-60/E-50 which MIDI Set it should recall when you switch it on:

(1) Press the ⬛MENU⬛ button.
The display changes to:

(2) Press the ⬛UTILITY⬛ field, followed by the ⬛STARTUP⬛ field.

(3) Press the ⬛MIDI SET⬛ field and use the ⬛DATA/ENTRY⬛ dial or the ⬛DEC⬛/⬛INC⬛ buttons to select the MIDI Set to be recalled when the E-60/E-50 is switched on.

(4) Switch on the ⬛RECALL⬛ field.
Switch off this button icon if no MIDI Set should be recalled when the E-60/E-50 is switched on.
Note: If the E-60/E-50 is also set to recall a User Program that contains a MIDI link, that selection is ignored if the MIDI SET ⬛RECALL⬛ button icon is on.

(5) Press the ⬛EXIT⬛ button to return to the main page.

18. Miscellaneous

Using V-LINK

■About V-LINK

V-LINK (**V-LINK**) is a function that provides for the integration of music and visual material. By using V-LINK-compatible video devices (i.e. an Edirol DV-7PR), visual effects can be easily linked to and made part of the expressive elements of a performance.

By using the E-60/E-50 with an Edirol DV-7PR, you can:

- Use the E-60/E-50's keyboard (highest octave) to switch images (clips). Press and hold a key for longer transitions ("fades"). Briefly press a key for fast transitions.
- Use the BENDER axis of the BENDER/MODULATION lever to change the playback speed of the picture material or to select a different color.
- Use the D Beam controller (E-60) to control several effects (this depends on the function you assign to the D Beam, see below).

V-Link signals are transmitted via MIDI OUT.

(1) Connect the E-60/E-50's MIDI OUT socket to the USB port of the video processor (via an optional UM-1 interface).

MIDI OUT

Edirol UM-1

REMOTE

Edirol DV-7PR

Projector   Monitor
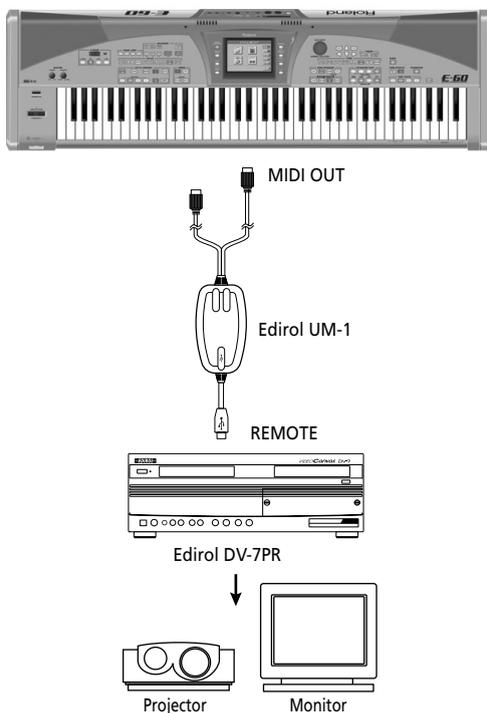
(2) Press the V-LINK button (it lights).

(The keys in the highest octave now act as controllers and no longer play notes.)

If you prefer to work with the following display page, press and hold the V-LINK button.

You can also select this page by pressing the MENU button→ V-LINK field.

(3) Press the slider icon of the paramater you want to set and use the DATA/ENTRY dial (or DEC/INC buttons) or the "V-LINK" keys (highest octave) to manipulate the video pictures.

CLIP: Allows you to select the Edirol DV-7PR's clips (or palettes) 1~32. You can also press the keys in the highest octave to switch clips 1~8.

PALETTE: Allows you to switch between palettes 1~20.

DISSOLVE TIME: Allows you to set the transition speed between images. The velocity values of the keys in the highest octave can also be used to control the transition speed (but only for the eight clips that can be selected via the keyboard).

SPEED PLAYBK: Moving the fader icon upwards speeds up playback, moving it downwards slows down playback. At the center position, playback speed is normal.

VFX: Allows you to change video effects. This function is not available if the receiving video processor is set to "Off".
Note: VFX2 is not supported by the DV-7.

BRIGHTNESS: Controls the brightness of the image.

COLOR CB: Allows you to change the color. There are five steps that can be selected by pressing the lever several times: green, violet, blue, red, original clip color.

COLOR CR: Allows you to change the color (green, violet, blue, red, original clip color).

D Beam (E-60)	Allows you to control several effects (this depends on the function you assign to the D Beam controller):
	Vinyl RPM→ Fade to black + playback speed
	Cutting→ Fade to back
	Harp, Marimba, Guitar→ Fade to white
	Chimes→ Lumin
	Seashore→ Sepia
	LoFi→ Color
	Sweep→ Post
	Scratch→ Color Blue
	Explosion→ Color Red
	Gunshot→ Color Violet
	Tempo Up & Down + Pitch Up & Down→ Playback speed

Note: The E-60/E-50 does not support the Edirol DV-7PR's dual stream mode.

- Press the INIT SINGLE VALUE field to reset the currently selected parameter to its default value.
- Press the INIT ALL VALUES field to reset all parameters to their default values.

(4) Press V-LINK again to switch off this function (the button goes dark).
Note: V-LINK messages are transmitted on MIDI channels 13 and 14.
Note: For details on "Clips"/"Palettes", "Dissolve Time", and "Color Difference" signals (Cb/Cr), refer to the Edirol DV-7PR's manual.

General settings

Here are several functions that apply to the E-60/E-50 as a whole and haven't been covered elsewhere in this owner's manual.

(1) Press the MENU button.
The display changes to:

(2) Press the UTILITY field, followed by the GLOBAL field.

(3) Press the relevant field in the FEEDBACK column to switch that function on or off.

(4) Press the Back field to return to the menu or the EXIT button to return to the main page.

Song/Arranger Start Priority

Normally, when you attempt to start Arranger playback while a song is being played back, the Arranger does not respond. The same is true when you try to start song playback while the Arranger is running. That's because the SONG/ARRANGER START PRIORITY function is on and gives priority to the section that is already running. You can, however, switch this system off.

In that case, starting Arranger playback while a song is running will stop the song and launch Style playback. If the Arranger is running while you press PLAY/STOP ▶/■, the song starts and the Arranger stops.

Note: This switch does not apply when you record using Arranger backing (see p. 41): there, both sections can work simultaneously.

Note: START PRIORITY also applies to situations where you (try to) start Arranger playback using the SYNC START function.

Flashing Exit

Whenever you jump to a different page than the main page, the EXIT starts flashing to signal that you can press it to return to the main page. If you don't need that flashing pattern (and want the button to remain lit), switch off the FLASHING EXIT button icon.

Flashing Metronome

While the Arranger is stopped, the METRONOME button flashes in red to indicate the current tempo. If you don't need that flashing pattern, switch off the FLASHING METRONOME button icon.

Info

There may be times when you need to check the remaining capacity of the internal memory and connected memory card:

(1) Press the MENU button.

(2) Press the UTILITY field, followed by the INFO field.

- ● Free Space Internal Memory—Informs you about the remaining storage capacity of the internal memory.
- ● Free Space Memory Card—Informs you about the remaining storage capacity of the connected memory card.
- ● Version—Displays the version number of the E-60/E-50's operating system, along with its creation date and time.

(3) Press the Back field to return to the menu or the EXIT button to return to the main page.

Initializing the E-60/E-50 (Factory Reset)

After working extensively with your E-60/E-50, you may want to recall the original factory settings. Before doing so, however, it would be a good idea to save your own settings to a memory card (see p. 176) or to archive them via USB (see p. 184).

Here is how to initialize your E-60/E-50:

(1) Press the MENU button.
(2) Press the UTILITY field, followed by the FACTORY RESET field.

(3) Press the EXECUTE field to initialize the E-60/E-50 or the Back field to return to the menu if you have changed your mind. (You can also press the EXIT button to return to the main page.)
The message "Operation Successful" informs you that the E-60/E-50 has been initialized.

Note: This operation does not affect the data in the E-60/E-50's internal memory: they are not erased – the E-60/E-50 just doesn't use them anymore.

19. Specifications

■ **Keyboard:**
76-note synthesizer-action keyboard (E-60)
61-note synthesizer-action keyboard (E-50)

■ **Sound source:**

Max. polyphony	64 voices
Sounds	1050 tones in 8 families, 34 Drum Sets
Multitimbral parts	32
Effects processors	3 programmable units: 8x Reverb, 8x Chorus 41x Multi-FX for Keyboard parts
Compatibility	GM2/GS

■ **Styles:**
136 Styles in 8 families
80 programmable links to additional Styles (CUSTOM)

Unlimited access	Internal memory, memory card, floppy disk (via FINDER)
Style Cover	26 ALL Covers 16 Drum Covers 24 Bass Covers
Style Makeup Tools	Instrument-oriented editing
User Style Composer	8 tracks with microscope and macro editing
One Touch	4 programmable registrations per Style

■ **Songs:**

Real-time SMF player	4 programmable MARK & JUMP locations
Song Cover	26 ALL Covers 16 Drum Covers 24 Bass Covers
Song Makeup Tools	Instrument-oriented editing
Lyrics & chord display, score display	
Other functions	PLAY LIST function (99 steps) NEXT SONG function Text Import/Export & lyrics synchronization
Song Finder	Manages up to 99,999 songs Play & Search function

■ **Sequencer:**
16-track sequencer with microscope and macro editing functions, Style Converter

■ **Display type & controls**

Monochrome 1/4 VGA	Touch-screen with 3D-SG (3D simulated graphics) 16 grayscale levels
Contrast potentiometer	

■ **Panel controls:**

DATA ENTRY dial with switching function	Data entry
Cursor	6 switches (data entry): INC, DEC, Up, Down, Right, Left
PITCH BEND/MODULATION lever, D Beam controller (with macro settings, E-60), MASTER VOLUME knob, KEYBOARD/ACCOMP BALANCE knob	
Keyboard Part switches	UP1, UP2, LWR, MBS
Tone Assign	UP1, UP2, LWR, MBS

■ **User Programs:**
144 Set List references for access via front panel

Unlimited access	Internal memory, memory card, floppy disk (via FINDER)
Additional functions	Parameter Hold Song Link MIDI Set Link

■ **Music Assistant registrations:**
300 factory registrations
Unlimited number of programmable entries

■ **Data storage**

Floppy disk drive	3,5", 2HD/2DD
Internal memory	Solid-State Disk
Memory card	PCMCIA (Compact Flash, Memory Stick, Smart Media, Microdrive)
Type of files managed	Styles, Songs (SMF), User Programs, MIDI Sets, Play Lists, .txt files

■ **Other functions:**

Keyboard Modes	Split (adjustable split point), Whole
Easy Setting	Arranger, Organ, Piano, Guitar Mode
Chord voicing	ACV (Adaptive Chord Voicing)
Melody Intelligence	18 types
Singer Key Adapter	–6~+5 semi-tones (automatic SMF transposition)
Miscellaneous	Tap Tempo, Sync Start/Stop, V-Link, interactive demo (in several languages)
System updates	Flash memory
USB	Data transfer & MIDI communication

■ **Connectors**

Headphone sockets	2
Pedal & footswitch sockets	HOLD FOOTSWITCH/EXPRESSION (programmable)
Audio connections	
OUTPUT sockets	L/Mono, R (1/4")
Data exchange	
PCMCIA slot (CompactFlash, Memory Stick, Smart Media, Microdrive)	
USB port (data storage & MIDI communication)	
MIDI IN & OUT	

■ General specifications:
Speaker power	10W x2 RMS
Power supply	PSB-4U adapter, 12V/3.5A
Dimensions (mm)	E-60:
	1260 (W) x 161 (H) x 374 (D)
	E-50:
	1020 (W) x 152.5 (H) x 355.5 (D)
Weight	E-60: 13kg/E-50: 8.5kg
Supplied accessories	Owner's Manual, power cord, metal music stand, CD-ROM, External AC adapter, DATABASE MANAGER software

Options
PK-5A Dynamic MIDI Pedal, MSA/MSD/MSE series floppy disks (Roland & third-party),
RH-25/50/200/300 Headphones, DP-2 Pedal switch, DP-6 Pedal switch (piano type), BOSS FS 5U Foot switch,
EV-5/7 Expression pedal, BOSS FV-300L Volume/Expression pedal, KC-150/350/550 Keyboard amplifiers
Memory cards (third-party manufacturers)

Note: Specifications are subject to change without prior notice.

20. MFX types and parameters

1. Thru
The effect processor is bypassed.

2. Stereo EQ
This is a four-band stereo equalizer (low, mid x 2, high). Stereo signals (like certain piano sounds) are thus not combined to a mono signal before being processed.
- **EQ Low Frequency (200, 400Hz)**—Frequency of the low range you wish to boost or cut.
- **EQ Low Gain (–15dB~0~15dB)**—Gain of the low range. Negative values reduce the level.
- **EQ High Frequency (2000, 4000, 8000Hz)**—Frequency of the high range you wish to boost or cut.
- **EQ High Gain (–15dB~0~15dB)**—Gain of the high range. Negative values reduce the level.
- **EQ Mid 1 Frequency (200~8000Hz)**—Frequency of the middle range 1 you wish to boost or cut. This is a parametric EQ band.
- **EQ Mid 1 Q (0.5, 1.0, 2.0, 4.0, 8.0)**—Width of the middle range 1. Set a higher value for "Q" to narrow the range to be boosted or cut.
- **EQ Mid 2 Gain (–15dB~0~15dB)**—Gain of middle range 1.
- **EQ Mid 2 Frequency (200~8000Hz)**—Frequency of the middle range 2 you wish to boost or cut. This is a parametric EQ band.
- **EQ Mid 2 Q (0.5, 1.0, 2.0, 4.0, 8.0)**—Width of the middle range 2. Set a higher value for "Q" to narrow the range to be boosted or cut.
- **EQ Mid 2 Gain (–15dB~0~15dB)**—Gain of the middle range 2.
- **Level (0~127)**—Output level. Use this parameter to compensate for exaggerated level differences resulting from the settings you made.

3. Overdrive
Creates a soft distortion similar to that produced by vacuum tube amplifiers.
- **Drive (0~127)**—Degree of distortion. Also changes the volume.
- **Panpot (L64~0~63R)**—Stereo location of the output sound. This is a mono effect that combines incoming signals. You can, however, place the processed signal anywhere between the left and right channels.
- **Amp Simulator Type**—Allows you to specify what kind of guitar amp will be simulated: *SMALL*: small amp, *BUILT-IN*: single-unit type amp, *2-STACK*: large double stack amp, *3-STACK*: large triple stack amp.
- **EQ Low Gain (–15dB~0~15dB)**—Gain of the low range.
- **EQ High Gain (–15dB~0~15dB)**—Gain of the high range.
- **Level (0~127)**—Output level. Use this parameter to compensate for exaggerated level differences resulting from the settings you made.

4. Distortion
Produces a more intense distortion than the above. The parameters are the same as for "3. Overdrive".

5. Phaser
Adds phase-shifted copy to the original sound and modulates it.
- **Phaser Manual (100~8000Hz)**—Adjusts the basic frequency that is modulated by the effect.
- **Phaser Rate (0.05~10.0Hz)**—Frequency, i.e. modulation speed.
- **Phaser Depth (0~127)**—Modulation intensity.
- **Phaser Resonance (0~127)**—Amount of feedback. Higher values create a rather more "synthetic character".
- **Phaser Mix Level (0~127)**—Level of the phase-shifted sound with respect to the original signal.
- **Panpot (L64~0~63R)**—Stereo location of the output sound. This is a mono effect that combines incoming signals. You can, however, place the processed signal anywhere between the left and right channels.
- **Level (0~127)**—Output level. Use this parameter to compensate for exaggerated level differences resulting from the settings you made.

6. Spectrum
Spectrum is a type of filter that modifies the timbre by boosting or cutting the level at specific frequencies.
- **Spectrum 250Hz Gain (–15dB~0~15dB)**
- **Spectrum 500Hz Gain (–15dB~0~15dB)**
- **Spectrum 1000Hz Gain (–15dB~0~15dB)**
- **Spectrum 1250Hz Gain (–15dB~0~15dB)**
- **Spectrum 2000Hz Gain (–15dB~0~15dB)**
- **Spectrum 3150Hz Gain (–15dB~0~15dB)**
- **Spectrum 4000Hz Gain (–15dB~0~15dB)**
- **Spectrum 8000Hz Gain (–15dB~0~15dB)**—Gain of each frequency band.
- **Spectrum Band Width Q (0.5, 1.0, 2.0, 4.0, 8.0)**—Simultaneously adjusts the width of the adjusted ranges for all the frequency bands.
- **Panpot (L64~0~63R)**—Stereo location of the output sound. This is a mono effect that combines incoming signals. You can, however, place the processed signal anywhere between the left and right channels.
- **Level (0~127)**—Output level. Use this parameter to compensate for exaggerated level differences resulting from the settings you made.

7. Enhancer
This effect controls the overtone structure of the high frequencies, adding sparkle and tightness to the sound.
- **Enhancer Sens (0~127)**—Sensitivity of the enhancer.
- **Mix Level (0~127)**—Level of the overtones generated by the enhancer.
- **EQ Low Gain (–15dB~0~15dB)**—Gain of the low range.
- **EQ High Gain (–15dB~0~15dB)**—Gain of the high range.
- **Level (0~127)**—Output level. Use this parameter to compensate for exaggerated level differences resulting from the settings you made.

8. Auto Wah
This effect controls a filter to create cyclic change in timbre (an automatic wah effect).

● Auto Wah Filter Type (LPF, BPF)—Type of filter. *LPF*: the wah effect is applied over a wide frequency range. *BPF*: the wah effect is applied over a narrow frequency range.

● Auto Wah Rate (0.05~10.0Hz)—Frequency, i.e. modulation speed.

● Auto Wah Depth (0~127)—Modulation intensity.

● Auto Wah Sens (0~127)—Adjusts the sensitivity with which the filter is controlled.

● Auto Wah Manual (0~127)—Adjusts the center frequency at which the effect is applied.

● Auto Wah Peak (0~127)—Adjusts the amount of the wah effect that will occur in the range of the center frequency. Set a higher value to narrow the range to be affected.

● Level (0~127)—Output level. Use this parameter to compensate for exaggerated level differences resulting from the settings you made.

9. Rotary

This effect simulates the sound of the rotary speakers often used with the electric organs. Since the movement of the high-range and low-range rotors can be set independently, the unique type of modulation characteristic of these speakers can be simulated quite closely. This effect is most suitable for electric organ sounds (of the ORGAN bank).

● Tweeter Slow Rate (0.05~10.0Hz)

● Woofer Slow Rate (0.05~10.0Hz)—Slow speed (SLOW) of the high- or low-frequency rotor.

● Tweeter Fast Rate (0.05~10.0Hz)

● Woofer Fast Rate (0.05~10.0Hz)—Fast speed (FAST) of the high- or low-frequency rotor.

● Rotary Speed (Slow, Fast)—Simultaneously switches the rotational speed of the low-frequency and high-frequency rotors. *SLOW*: Slows down the rotation to the "Slow Rate". *FAST*: Speeds up the rotation to the "Fast Rate".

● Tweeter Acceleration (0~15)

● Woofer Acceleration (0~15)—Adjusts the time it takes the rotor in question to reach the newly selected speed ("Fast" or "Slow"). Lower values correspond to slower transitions.

● Tweeter Level (0~127)

● Woofer Level (0~127)—Volume of the rotor in question.

● Separation (0~127)—Spatial dispersion of the sound.

● Level (0~127)—Output level.

10. Compressor

Reduces high levels (peaks) and boosts low levels, smoothing out fluctuations in volume.

● Compressor Sustain (0~127)—Allows you to specify how strongly incoming signals should be compressed, which results in a longer sustain.

● Compressor Attack (0~127)—Sets the speed at which compression starts.

● Panpot (L64~0~63R)—Stereo location of the output sound. This is a mono effect that combines incoming signals. You can, however, place the processed signal anywhere between the left and right channels.

● Compressor Post Gain (0, +6, +12, +18dB)—Adjusts the output gain. Use this parameter to make up for a significant volume loss due to extreme settings.

● EQ Low Gain (–15dB~0~15dB)—Gain of the low range.

● EQ High Gain (–15dB~0~15dB)—Gain of the high range.

● Level (0~127)—Output level.

11. Limiter

Compresses signals that exceed the specified level, preventing distortion from occurring. Unlike a compressor, it does not boost the level of weaker signals.

● Limiter Threshold (0~127)—Adjusts the volume at which compression begins.

● Limiter Release (0~127)—Allows you to specify how long signal compression should remain in effect after the signal volume falls below the Threshold value.

● Limiter Ratio (1.5:1, 2:1, 4:1, 100:1)—Allows you to specify how strongly volume peaks should be compressed. Choose "100:1" if the Threshold level must never be exceeded (which is a true Limiter function).

● Panpot (L64~0~63R)—Stereo location of the output sound. This is a mono effect that combines incoming signals. You can, however, place the processed signal anywhere between the left and right channels.

● Limiter Post Gain (0, +6, +12, +18dB)—Adjusts the output gain. Use this parameter to make up for a significant volume loss due to extreme settings.

● EQ Low Gain (–15dB~0~15dB)—Gain of the low range.

● EQ High Gain (–15dB~0~15dB)—Gain of the high range.

● Level (0~127)—Output level.

12. Hexa-Chorus

Uses a six-phase chorus (six layers of chorused sound) to create a dense and spatial effect.

● Chorus Pre Delay (0.0~100.0ms)—Adjusts the delay between the incoming direct signal and the moment when the chorus starts working.

● Chorus Rate (0.05~10.0Hz)—Frequency, i.e. modulation speed.

● Chorus Depth (0~127)—Modulation intensity.

● Chorus Pre Delay Deviation (0~20)—Adjusts the differences in Pre Delay between each chorus line (there are six of them).

● Chorus Depth Deviation (-20~0~20)—Adjusts the difference in modulation depth between each chorus sound.

● Chorus Pan Deviation (0~20)—Adjusts the distribution of the various chorus lines in the stereo image.
0: All chorus sounds are in the center.
20: Each chorus sound will be spaced at 60 degree intervals relative to the center.

● Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct (D) and the effect sound (W).

● Level (0~127)—Output level.

13. Trem Chorus

This is a chorus effect with added Tremolo (cyclic modulation of volume).

● Chorus Pre Delay (0.0~100.0ms)—Adjusts the delay between the incoming direct signal and the moment when the chorus starts working.

● Chorus Rate (0.05~10.0Hz)—Frequency, i.e. modulation speed.

● Chorus Depth (0~127)—Modulation intensity.

● Tremolo Rate (0.05~10.0Hz)—Modulation frequency of the tremolo effect.

● Tremolo Separation (0~127)—Allows you to set the level of the tremolo effect with respect to the chorus modulation.

● Tremolo Phase (0~180 deg)—Spread of the tremolo effect.

● Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct (D) and the effect sound (W).
● Level (0~127)—Output level.

14. Space-D
This is a multiple chorus that applies two-phase modulation in stereo. It gives no impression of modulation, but produces a transparent chorus effect.
● Chorus Pre Delay (0.0~100.0ms)—Adjusts the delay between the incoming direct signal and the moment when the chorus starts working.
● Chorus Rate (0.05~10.0Hz)—Frequency, i.e. modulation speed.
● Chorus Depth (0~127)—Modulation intensity.
● Chorus Phase (0~180deg)—Spatial spread of the sound.
● EQ Low Gain (–15dB~0~15dB)—Gain of the low range.
● EQ High Gain (–15dB~0~15dB)—Gain of the high range.
● Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct (D) and the effect sound (W).
● Level (0~127)—Output level.

15. St. Chorus
This is a stereo chorus. A filter is provided so that you can adjust the timbre of the chorus sound.
● Filter Type (OFF, LPF, HPF)—Type of filter. *OFF*: no filter is used. *LPF*: cuts the frequency range above the Cutoff value. *HPF*: cuts the frequency range below the Cutoff value.
● Cutoff Frequency (200~8000Hz)—Basic frequency of the filter.
● Chorus Pre Delay (0.0~100.0ms)—Adjusts the delay between the incoming direct signal and the moment when the chorus starts working.
● Chorus Rate (0.05~10.0Hz)—Frequency, i.e. modulation speed.
● Chorus Depth (0~127)—Modulation intensity.
● Chorus Phase (0~180 deg)—Spatial spread of the sound.
● EQ Low Gain (–15dB~0~15dB)—Gain of the low range.
● EQ High Gain (–15dB~0~15dB)—Gain of the high range.
● Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct (D) and the effect sound (W).
● Level (0~127)—Output level.

16. St. Flanger
This is a stereo flanger. It produces a metallic resonance that rises and falls like a jet airplane taking off or landing.
● Filter Type (OFF, LPF, HPF)—Type of filter. OFF: no filter is used. LPF: cuts the frequency range above the Cutoff value. HPF: cuts the frequency range below the Cutoff value.
● Cutoff Frequency (200~8000Hz)—Basic frequency of the filter.
● Flanger Pre Delay (0.0~100.0ms)—Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
● Flanger Rate (0.05~10.0Hz)—Frequency, i.e. modulation speed.
● Flanger Depth (0~127)—Modulation intensity.
● Flanger Phase (0~180 deg)—Spatial spread of the sound.
● Flanger Feedback (–98%~0~98%)—Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (–) settings will invert the phase.
● EQ Low Gain (-15dB~0~15dB)—Gain of the low range.
● EQ High Gain (–15dB~0~15dB)—Gain of the high range.

● Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct (D) and the effect sound (W).
● Level (0~127)—Output level.

17. Step Flanger
A Step Flanger is a flanger effect with clearly noticeable steps rather than continuous pitch changes.
● Flanger Pre Delay (0.0~100.0ms)—Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
● Flanger Rate (0.05~10.0Hz)—Frequency, i.e. modulation speed.
● Flanger Depth (0~127)—Modulation intensity.
● Flanger Feedback (–98%~0~98%)—Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (–) settings will invert the phase.
● Step Rate (0.10~20.0Hz, note)—Rate (period) of pitch change
● Flanger Phase (0~180deg)—Spatial spread of the sound.
● EQ Low Gain (–15dB~0~15dB)—Gain of the low range.
● EQ High Gain (–15dB~0~15dB)—Gain of the high range.
● Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct (D) and the effect sound (W).
● Level (0~127)—Output level.

18. St. Delay
Delay is an effect that allows you repeat the input signal, thus creating echoes (repetition).
● Delay FBK Mode (Normal, Cross)—Select the way in which delay sound is fed back into the effect. *NORMAL*: The left delay sound will be fed back into the left delay and the right delay sound into the right delay. *CROSS*: The left delay sound will be fed back into the right delay and the right delay sound into the left delay.
● Delay Left (0.0~500.0ms)—Adjust the time from the direct sound until when the left delay sound is heard.
● Delay Right (0.0~500.0ms)—Adjust the time from the direct sound until when the right delay sound is heard.
● FBK Phase Left (Normal, Invert)—Select the phase of the left delay sound. *NORMAL*: Phase is not changed. *INVERT*: Phase is inverted.
● FBK Phase Right (Normal, Invert)—Select the phase of the right delay sound. *NORMAL*: Phase is not changed. *INVERT*: Phase is inverted.
● Delay Feedback (–98%~0~98%)—Adjusts the amount of the delay sound that's fed back into the effect. Negative (–) settings invert the phase.
● Delay HF Damp (200~8000Hz, Bypass)—Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to *BYPASS*.
● EQ Low Gain (–15dB~0~15dB)—Gain of the low range.
● EQ High Gain (–15dB~0~15dB)—Gain of the high range.
● Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct (D) and the effect sound (W).
● Level (0~127)—Output level.

19. Mod. Delay

This effect adds modulation to the delayed sound, producing an effect similar to a Flanger.

● **Delay FBK Mode (Normal, Cross)**—Select the way in which delay sound is fed back into the effect. NORMAL: The left delay sound will be fed back into the left delay and the right delay sound into the right delay. CROSS: The left delay sound will be fed back into the right delay and the right delay sound into the left delay.

● **Delay Left (0.0~500.0ms)**—Adjust the time from the direct sound until when the left delay sound is heard.

● **Delay Right (0.0~500.0ms)**—Adjusts the time until the delay sound is heard.

● **Delay Feedback (–98%~0~98%)**—Adjusts the amount of the delay sound that's fed back into the effect. Negative (–) settings invert the phase.

● **Delay HF Damp (200~8000Hz, Bypass)**—Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

● **Modulation Rate (0.05~10.0Hz)**—Frequency, i.e. modulation speed.

● **Modulation Depth (0~127)**—Adjust the depth of the modulation.

● **Modulation Phase (0~180 deg)**—Adjust the spatial spread of the sound

● **EQ Low Gain (–15dB~0~15dB)**—Gain of the low range.

● **EQ High Gain (–15dB~0~15dB)**—Gain of the high range.

● **Balance (D100:0W, D50:50W, D0:100W)**—Volume balance between the direct (D) and the effect sound (W).

● **Level (0~127)**—Output level.

20. 3 Tap Delay

The Triple Tap Delay produces three delay sounds: center, left and right.

● **Delay Left (200~1000ms, note)**—Adjust the time from the direct sound until when the left delay sound is heard.

● **Delay Right (200~1000ms, note)**—Adjust the time from the direct sound until when the right delay sound is heard.

● **Delay Center (200~1000ms, note)**—Adjust the time delay from the direct sound until when the center delay sound is heard.

● **Delay Feedback (–98%~0~98%)**—Adjusts the amount of the delay sound that's fed back into the effect. Negative (–) settings invert the phase.

● **Delay HF Damp (200~8000Hz, Bypass)**—Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

● **Delay Level Left (0~127)**—Adjust the volume of the left delay sound.

● **Delay Level Right (0~127)**—Adjust the volume of the right delay sound.

● **Delay Level Center (0~127)**—Adjust the volume of the center delay sound.

● **EQ Low Gain (–15dB~0~15dB)**—Gain of the low range.

● **EQ High Gain (–15dB~0~15dB)**—Gain of the high range.

● **Balance (D100:0W, D50:50W, D0:100W)**—Volume balance between the direct (D) and the effect sound (W).

● **Level (0~127)**—Output level.

21. 4 Tap Delay

Delay with four repetition lines.

● **Delay 1~4 (200~1000ms, note)**—Adjusts the time until the delay is heard.

● **Delay Level 1~4 (0~127)**—Output level of the delay sound.

● **Delay Feedback (–98%~0~98%)**—Adjusts the amount of the delay sound that's fed back into the effect. Negative (–) settings invert the phase.

● **Delay HF Damp (200~8000Hz, Bypass)**—Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

● **Balance (D100:0W, D50:50W, D0:100W)**—Volume balance between the direct (D) and the effect sound (W).

● **Level (0~127)**—Output level.

22. Time Delay

This effect controls the delay time and pitch in realtime. Lengthening the delay time will lower the pitch and shortening it will raise the pitch.

● **Delay Time (200~1000ms, note)**—Adjusts the time until the delay is heard.

● **Delay Feedback (–98%~0~98%)**—Adjusts the amount of the delay sound that's fed back into the effect. Negative (–) settings invert the phase.

● **Delay Acceleration (0~15)**—Adjusts the time over which the Delay Time changes from the current setting to a specified new setting. The rate of change for the Delay Time directly affects the rate of pitch change.

● **Delay HF Damp (200~8000Hz, Bypass)**—Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

● **Panpot (L64~0~63R)**—Stereo location of the output sound. This is a mono effect that combines incoming signals. You can, however, place the processed signal anywhere between the left and right channels.

● **EQ Low Gain (–15dB~0~15dB)**—Gain of the low range.

● **EQ High Gain (–15dB~0~15dB)**—Gain of the high range.

● **Balance (D100:0W, D50:50W, D0:100W)**—Volume balance between the direct (D) and the effect sound (W).

● **Level (0~127)**—Output level.

23. 2 Pitch Shifter

A Pitch Shifter changes the pitch of the original sound. This 2-voice effect contains two pitch shifters and adds two transposed copies to the original sound.

● **Pitch Shift Mode (1~5)**—Higher settings of this parameter will result in slower response, but steadier pitch.

● **Pitch A Coarse (–24~0~+12 semitone)**—Adjusts the pitch of Pitch Shift A in semitone steps (–2~+1 octaves).

● **Pitch B Coarse (–24~0~+12 semitone)**—Adjusts the pitch of Pitch Shift B in semitone steps (–2~+1 octaves).

● **Pitch A Fine (–100~0~+100 cent)**—Makes fine adjustments to the pitch of Pitch Shift A in 2-cent steps (–100~+100 cents). One cent is 1/100th of a semitone.

● **Pitch B Fine (–100~0~+100 cent)**—Makes fine adjustments to the pitch of Pitch Shift B in 2-cent steps (–100~+100 cents). One cent is 1/100th of a semitone.

● **Pitch A Pre Delay (0.0~500.0ms)**—Adjust the time delay from when the direct sound begins until the Pitch Shift A sound is heard.

● Pitch B Pre Delay (0.0~500.0ms)—Adjusts the time delay from when the direct sound begins until the Pitch Shift B sound is heard.

● Pitch A Panpot (L64~0~63R)—Adjusts the stereo location of the Pitch Shift A sound. L64 is far left, 0 is center and 63R is far right.

● Pitch B Panpot (L64~0~63R)—Adjusts the stereo location of the Pitch Shift B sound. L64 is far left, 0 is center and 63R is far right.

● Level Balance (A100:0B, A50:50B, A0:100B)—Adjusts the volume balance between the Pitch Shift A and Pitch Shift B sounds. When set to A100:0B, only the sound of Pitch Shift A is output; when set to A0:100B, only the sound of Pitch Shift B is output.

● Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct (D) and the effect sound (W).

● Level (0~127)—Output level.

24. FBK Pitch

Pitch Shifter with several echoes.

● Pitch Shift Mode (1~5)—Higher settings of this parameter will result in slower response, but steadier pitch.

● Pitch Coarse (–24~0~+12 semitones)—Adjust the pitch of the pitch shifted sound in semitone steps (–2~+1 octaves).

● Pitch Fine (–100~0~+100 cent)—Make fine adjustments to the pitch of the pitch shifted sound in 2-cent steps (one cent is 1/100th of a semi tone).

● Pitch Pre Delay (0.0~500.0ms)—Adjust the time delay from when the direct sound begins until the pitch shifted sound is heard.

● Pitch Feedback (–98%~0~98%)—Adjust the proportion (%) of the processed sound that is fed back into the effect. Negative (–) settings will invert the phase.

● Panpot (L64~0~63R)—Stereo location of the output sound. This is a mono effect that combines incoming signals. You can, however, place the processed signal anywhere between the left and right channels.

● EQ Low Gain (–15dB~0~15dB)—Gain of the low range.

● EQ High Gain (–15dB~0~15dB)—Gain of the high range.

● Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct (D) and the effect sound (W).

● Level (0~127)—Output level.

25. Reverb

A nice Reverb effect.

● Reverb Type (Room 1, Room 2, Stage 1, Stage 2, Hall 1, Hall 2)—Type of reverb.
  Room1: Dense reverb with short decay.
  Room2: Sparse reverb with short decay.
  Stage1: Reverb with greater late reverberation.
  Stage2: Reverb with strong early reflections.
  Hall1: Reverb with clear reverberance.
  Hall2: Reverb with rich reverberance.

● Reverb Pre Delay (0.0~100.0ms)—Adjusts the delay time from the direct sound until the reverb sound is heard.

● Reverb Time (0~127)—Time length of reverberation.

● Reverb HF Damp (200~8000Hz, Bypass)—Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

● EQ Low Gain (–15dB~0~15dB)—Gain of the low range.

● EQ High Gain (–15dB~0~15dB)—Gain of the high range.

● Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct (D) and the effect sound (W).

● Level (0~127)—Output level.

26. Gate Reverb

This is a special type of reverb in which the reverberant sound is cut off before its natural length.

● Reverb Type (Normal, Reverse, Sweep 1, Sweep 2)—Type of reverb.
  NORMAL: Conventional gated reverb.
  REVERSE: Backwards reverb.
  SWEEP1: The reverberant sound moves from right to left.
  SWEEP2: The reverberant sound moves from left to right.

● Reverb Pre Delay (0.0~100.0ms)—Adjusts the delay time from the direct sound until the reverb sound is heard.

● Reverb Gate Time (5~500ms)—Adjusts the time from when the reverb is heard until it disappears.

● EQ Low Gain (–15dB~0~15dB)—Gain of the low range.

● EQ High Gain (–15dB~0~15dB)—Gain of the high range.

● Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct (D) and the effect sound (W).

● Level (0~127)—Output level.

27. OD→ Chorus

This effect connects an Overdrive and a Chorus in series. ("Series" means that the output signal of the first effect is also processed by the second.)

● Overdrive Drive (0~127)—Degree of distortion. Also changes the volume.

● Overdrive Panpot (L64~0~63R)—Stereo location of the overdrive sound.

● Chorus Pre Delay (0.0~100.0ms)—Adjusts the delay between the incoming direct signal and the moment when the chorus starts working.

● Chorus Rate (0.05~10.0Hz)—Frequency, i.e. modulation speed.

● Chorus Depth (0~127)—Modulation intensity.

● Chorus Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct sound (D) and the chorus sound (W).

● Level (0~127)—Output level.

28. OD→ Flanger

This effect connects an Overdrive and a Flanger in series.

● Overdrive Drive (0~127)—Degree of distortion. Also changes the volume.

● Overdrive Panpot (L64~0~63R)—Stereo location of the overdrive sound.

● Flanger Pre Delay (0.0~100.0ms)—Adjusts the delay time from when the direct sound begins until the flanger sound is heard.

● Flanger Rate (0.05~10.0Hz)—Frequency, i.e. modulation speed.

● Flanger Depth (0~127)—Modulation intensity.

● Flanger Feedback (–98%~0~98%)—Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (–) settings will invert the phase.

● Flanger Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct sound (D) and the flanger sound (W).

● Level (0~127)—Output level.

29. OD→ Delay

This effect connects an overdrive and a delay in series.

● **Overdrive Drive (0~127)**—Degree of distortion. Also changes the volume.

● **Overdrive Panpot (L64~0~63R)**—Stereo location of the overdrive sound.

● **Delay Time (0.0~500.0ms)**—Adjusts the time until the delay is heard.

● **Delay Feedback (–98%~0~98%)**—Adjusts the amount of the delay sound that's fed back into the effect. Negative (–) settings invert the phase.

● **Delay HF Damp (200~8000Hz, Bypass)**—Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

● **Delay Balance (D100:0W, D50:50W, D0:100W)**—Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).

● **Level (0~127)**—Output level.

30. DST→ Chorus

This effect connects distortion and a chorus in series.

● **Distortion Drive (0~127)**—Degree of distortion. Also changes the volume.

● **Distortion Panpot (L64~0~63R)**—Stereo location of the distortion sound.

● **Chorus Pre Delay (0.0~100.0ms)**—Adjusts the delay between the incoming direct signal and the moment when the chorus starts working.

● **Chorus Rate (0.05~10.0Hz)**—Frequency, i.e. modulation speed.

● **Chorus Depth (0~127)**—Modulation intensity.

● **Chorus Balance (D100:0W, D50:50W, D0:100W)**—Volume balance between the direct sound (D) and the chorus sound (W).

● **Level (0~127)**—Output level.

31. DST→ Flanger

This effect connects distortion and a flanger effect in series.

● **Distortion Drive (0~127)**—Degree of distortion. Also changes the volume.

● **Distortion Panpot (L64~0~63R)**—Stereo location of the distortion sound.

● **Flanger Pre Delay (0.0~100.0ms)**—Adjusts the delay time from when the direct sound begins until the flanger sound is heard.

● **Flanger Rate (0.05~10.0Hz)**—Frequency, i.e. modulation speed.

● **Flanger Depth (0~127)**—Modulation intensity.

● **Flanger Feedback (–98%~0~98%)**—Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (–) settings will invert the phase.

● **Flanger Balance (D100:0W, D50:50W, D0:100W)**—Volume balance between the direct sound (D) and the flanger sound (W).

● **Level (0~127)**—Output level.

32. DST→ Delay

This effect connects distortion and a delay effect in series.

● **Distortion Drive (0~127)**—Degree of distortion. Also changes the volume.

● **Distortion Panpot (L64~0~63R)**—Stereo location of the distortion sound.

● **Delay Time (0.0~500.0ms)**—Adjusts the time until the delay is heard.

● **Delay Feedback (–98%~0~98%)**—Adjusts the amount of the delay sound that's fed back into the effect. Negative (–) settings invert the phase.

● **Delay HF Damp (200~8000Hz, Bypass)**—Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

● **Delay Balance (D100:0W, D50:50W, D0:100W)**—Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).

● **Level (0~127)**—Output level.

33. EH→ Chorus

This effect connects an enhancer and a chorus in series.

● **Enhancer Sens (0~127)**—Sensitivity of the enhancer.

● **Enhancer Mix Level (0~127)**—Level of the overtones generated by the enhancer.

● **Chorus Pre Delay (0.0~100.0ms)**—Adjusts the delay between the incoming direct signal and the moment when the chorus starts working.

● **Chorus Rate (0.05~10.0Hz)**—Frequency, i.e. modulation speed.

● **Chorus Depth (0~127)**—Modulation intensity.

● **Chorus Balance (D100:0W, D50:50W, D0:100W)**—Volume balance between the direct sound (D) and the chorus sound (W).

● **Level (0~127)**—Output level.

34. EH→ Flanger

This effect connects an enhancer and a flanger in series.

● **Enhancer Sens (0~127)**—Sensitivity of the enhancer.

● **Enhancer Mix Level (0~127)**—Level of the overtones generated by the enhancer.

● **Flanger Pre Delay (0.0~100.0ms)**—Adjusts the delay time from when the direct sound begins until the flanger sound is heard.

● **Flanger Rate (0.05~10.0Hz)**—Frequency, i.e. modulation speed.

● **Flanger Depth (0~127)**—Modulation intensity.

● **Flanger Feedback (–98%~0~98%)**—Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (–) settings will invert the phase.

● **Flanger Balance (D100:0W, D50:50W, D0:100W)**—Volume balance between the direct sound (D) and the flanger sound (W).

● **Level (0~127)**—Output level.

35. EH→ Delay

This effect connects an enhancer and a delay in series.

● **Enhancer Sens (0~127)**—Sensitivity of the enhancer.

● **Enhancer Mix Level (0~127)**—Level of the overtones generated by the enhancer.

● **Delay Time (0.0~500.0ms)**—Adjusts the time until the delay is heard.

● Delay Feedback (–98%~0~98%)—Adjusts the amount of the delay sound that's fed back into the effect. Negative (–) settings invert the phase.

● Delay HF Damp (200~8000Hz, Bypass)—Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

● Delay Balance (D100:0W, D50:50W, D0:100W)—Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).

● Level (0~127)—Output level.

36. Chorus→ DLY
This effect connects a chorus and a delay in series.

● Chorus Pre Delay (0.0~100.0ms)—Adjusts the delay between the incoming direct signal and the moment when the chorus starts working.

● Chorus Rate (0.05~10.0Hz)—Frequency, i.e. modulation speed.

● Chorus Depth (0~127)—Modulation intensity.

● Chorus Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct sound (D) and the chorus sound (W).

● Delay Time (0.0~500.0ms)—Adjusts the time until the delay is heard.

● Delay Feedback (–98%~0~98%)—Adjusts the amount of the delay sound that's fed back into the effect. Negative (–) settings invert the phase.

● Delay HF Damp (200~8000Hz, Bypass)—Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

● Delay Balance (D100:0W, D50:50W, D0:100W)—Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).

● Level (0~127)—Output level.

37. Flanger→ DLY
This effect connects a flanger and a delay in series.

● Flanger Pre Delay (0.0~100.0ms)—Adjusts the delay time from when the direct sound begins until the flanger sound is heard.

● Flanger Rate (0.05~10.0Hz)—Frequency, i.e. modulation speed.

● Flanger Depth (0~127)—Modulation intensity.

● Flanger Feedback (–98%~0~98%)—Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (–) settings will invert the phase.

● Flanger Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct sound (D) and the flanger sound (W).

● Delay Time (0.0~500.0ms)—Adjusts the time until the delay is heard.

● Delay Feedback (–98%~0~98%)—Adjusts the amount of the delay sound that's fed back into the effect. Negative (–) settings invert the phase.

● Delay HF Damp (200~8000Hz, Bypass)—Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

● Delay Balance (D100:0W, D50:50W, D0:100W)—Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).

● Level (0~127)—Output level.

38. CHO→ Flanger
This effect connects a chorus and a flanger in series.

● Chorus Pre Delay (0.0~100.0ms)—Adjusts the delay between the incoming direct signal and the moment when the chorus starts working.

● Chorus Rate (0.05~10.0Hz)—Modulation frequency of the chorus effect.

● Chorus Depth (0~127)—Modulation intensity of the chorus effect.

● Chorus Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct sound (D) and the chorus sound (W).

● Flanger Pre Delay (0.0~100.0ms)—Adjusts the delay time from when the direct sound begins until the flanger sound is heard.

● Flanger Rate (0.05~10.0Hz)—Modulation frequency of the flanger effect.

● Flanger Depth (0~127)—Modulation intensity of the flanger effect.

● Flanger Feedback (–98%~0~98%)—Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (–) settings will invert the phase.

● Flanger Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct sound (D) and the flanger sound (W).

● Level (0~127)—Output level.

39. CHO/Delay
This effect connects a chorus and a delay in parallel. ("Parallel" means that the input signal is processed by two effects that do not interact.)

● Chorus Pre Delay (0.0~100.0ms)—Adjusts the delay between the incoming direct signal and the moment when the chorus starts working.

● Chorus Rate (0.05~10.0Hz)—Frequency, i.e. modulation speed.

● Chorus Depth (0~127)—Modulation intensity.

● Chorus Balance (D100:0W, D50:50W, D0:100W)—Volume balance between the direct sound (D) and the chorus sound (W).

● Delay Time (0.0~500.0ms)—Adjusts the time until the delay is heard.

● Delay Feedback (–98%~0~98%)—Adjusts the amount of the delay sound that's fed back into the effect. Negative (–) settings invert the phase.

● Delay HF Damp (200~8000Hz, Bypass)—Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

● Delay Balance (D100:0W, D50:50W, D0:100W)—Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).

● Level (0~127)—Output level.

40. Flanger/DLY

This effect connects a flanger and a delay in parallel.

● **Flanger Pre Delay (0.0~100.0ms)**—Adjusts the delay time from when the direct sound begins until the flanger sound is heard.

● **Flanger Rate (0.05~10.0Hz)**—Frequency, i.e. modulation speed.

● **Flanger Depth (0~127)**—Modulation intensity.

● **Flanger Feedback (–98%~0~98%)**—Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (–) settings will invert the phase.

● **Flanger Balance (D100:0W, D50:50W, D0:100W)**—Volume balance between the direct sound (D) and the flanger sound (W).

● **Delay Time (0.0~500.0ms)**—Adjusts the time until the delay is heard.

● **Delay Feedback (–98%~0~98%)**—Adjusts the amount of the delay sound that's fed back into the effect. Negative (–) settings invert the phase.

● **Delay HF Damp (200~8000Hz, Bypass)**—Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

● **Delay Balance (D100:0W, D50:50W, D0:100W)**—Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).

● **Level (0~127)**—Output level.

41. CHO/Flanger

This effect connects a chorus and a flanger in parallel.

● **Chorus Pre Delay (0.0~100.0ms)**—Adjusts the delay between the incoming direct signal and the moment when the chorus starts working.

● **Chorus Rate (0.05~10.0Hz)**—Modulation frequency of the chorus effect.

● **Chorus Depth (0~127)**—Modulation intensity of the chorus effect.

● **Chorus Balance (D100:0W, D50:50W, D0:100W)**—Volume balance between the direct sound (D) and the chorus sound (W).

● **Flanger Pre Delay (0.0~100.0ms)**—Adjusts the delay time from when the direct sound begins until the flanger sound is heard.

● **Flanger Rate (0.05~10.0Hz)**—Modulation frequency of the flanger effect.

● **Flanger Depth (0~127)**—Modulation intensity of the flanger effect.

● **Flanger Feedback (–98%~0~98%)**—Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (–) settings will invert the phase.

● **Flanger Balance (D100:0W, D50:50W, D0:100W)**—Volume balance between the direct sound (D) and the flanger sound (W).

● **Level (0~127)**—Output level.

 21. MIDI Implementation Chart

[Music Workstation]

Model: E-60/E-50

Date: May 2006

Version: 1.00

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default	1~16	1~16	32 Parts 3 Logical Parts (Basic Channel, NTA1, NTA2)
	Changed	1~16, Off	1~16, Off	
Mode	Default	Mode 3	Mode 3	
	Message	Mode 3, 4 (M=1)	Mode 3, 4 (M=1)	*2
	Altered	*****		
Note Number		0~127	0~127	
	True Voice	*****	0~127	
Velocity	Note ON	O *1	O *1	
	Note OFF	X	X	
After Touch	Key's	X	O *1	
	Ch's	X	O *1	
Pitch Bend		O *1	O *1	
Control Change	0,32	O *1	O *1	Bank Select
	1	O *1	O *1	Modulation
	5	O	O	Portamento Time
	6, 38	O	O *1	Data Entry
	7	O *1	O *1	Volume
	10	O *1	O *1	Panpot
	11	O *1	O *1	Expression
	16	O *1	O *1	C1
	64	O *1	O *1	Hold 1
	65	O	O *1	Portamento
	66	O *1	O *1	Sostenuto
	67	O *1	O *1	Soft
	69	O	O	Hold 2
	71	O	O	Resonance
	72	O	O	Realease Time
	73	O	O	Attack Time
	74	O	O	Cutoff
	75	O	O	Decay Time
	76	O	O	Vibrato Rate
	77	O	O	Vibrato Depth
	78	O	O	Vibrato Delay
	84	O	O	Portamento Control
	91	O *1	O (Reverb) *1	Effect 1 Depth
	93	O *1	O (Chorus) *1	Effect 3 Depth
	98, 99	O *1	O *1	NRPN LSB, MSB
	100, 101	O *1	O *1	RPN LSB, MSB
Program Change		O *1	O *1	Program Number 1~128
	True #	*****	0~127	
System Exclusive		O *1	O *1	
System Common	Song Position Pointer	O *1	O	
	Song Sel	X	X	
	Tune	X	X	
System Real Time	Clock	O *1	O *1	
	Commands	O *1	O *1	
Aux Messages	All Sounds Off	X	O (120, 126, 127)	
	Reset All Controllers	X	O (121)	
	Local On/Off	O *1	O	
	All Notes Off	X	O (123-125)	
	Active Sensing	O	O	
	Reset	X	X	
Notes		*1 O X is selectable *2 Recognized as M= 1 even if M≠ 1		

Mode 1: OMNI ON, POLY
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
Mode 4: OMNI OFF, MONO

O: Yes
X: No

22. Chord Intelligence

C   C#   D   E♭   E   F

CM7   C#M7   DM7   E♭M7   EM7   FM7

C7   C#7   D7   E♭7   E7   F7

Cm   C#m   Dm   E♭m   Em   Fm

Cm7   C#m7   Dm7   E♭m7   Em7   Fm7

CmM7   C#mM7   DmM7   E♭mM7   EmM7   FmM7

Cdim   C#dim   Ddim   E♭dim   Edim   Fdim

Cm7 (♭5)   C#m7 (♭5)   Dm7 (♭5)   E♭m7 (♭5)   Em7 (♭5)   Fm7 (♭5)

Caug   C#aug   Daug   E♭aug   Eaug   Faug

Csus4   C#sus4   Dsus4   E♭sus4   Esus4   Fsus4

C7sus4   C#7sus4   D7sus4   E♭7sus4   E7sus4   F7sus4

C7/13   C#7/13   D7/13   E♭7/13   E7/13   F7/13

F# G Ab A Bb B

F#M7 GM7 AbM7 AM7 Bb M7 BM7

F#7 G7 Ab7 A7 Bb 7 B7

F#m Gm Abm Am Bb m Bm

F#m7 Gm7 Abm7 Am7 Bb m7 Bm7

F#mM7 GmM7 AbmM7 AmM7 Bb mM7 BmM7

F#dim Gdim Abdim Adim Bb dim Bdim

F#m7 (b5) Gm7 (b5) Abm7 (b5) Am7 (b5) Bb m7 (b5) Bm7 (b5)

F#aug Gaug Abaug Aaug Bb aug Baug

F#sus4 Gsus4 Absus4 Asus4 Bb sus4 Bsus4

F#7sus4 G7sus4 Ab7sus4 A7sus4 Bb 7sus4 B7sus4

F#7/13 G7/13 Ab7/13 A7/13 Bb 7/13 B7/13

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